The Journal of
NERVOUS and MENTAL DISEASE

VOL. 133, NO. 4
October, 1961
SERIAL NO. 947

GUILT BY LOOSE ANALOGY

An Editorial

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Many legitimate criticisms and questions center around psychotherapy in general and psychoanalytic psychotherapy in particular. There are others, however, which are asked out of bias. These become sources of continuing increments of confusion. Among them has been the loose analogy between psychoanalysis and brain-washing, to a consideration of which these observations will be addressed. It is important to think clearly about this issue in and of itself, but also because it is related to a widespread failure to appreciate the differences between the goals of persuasion and the goals of psychotherapy. (Note that I stress here not the achievements of psychotherapy but its goals.)

In recent years some of the books and articles which identify psychotherapy with brain-washing have come from respected sources. This has given the analogy a cloak of scientific precision which it does not deserve; because the analogy overlooks crucial differences between the psychotherapeutic process as competently conducted, and the distortions of it that occur when it miscarries, when it is ineptly handled, when it goes on too long, when the frustrations and impatience of the therapist lead him either into a subtle wheedling of the patient or into an incessant hammering at him. Certainly these deformations of the psychotherapeutic process occur, and far too often. Nor is any therapist wholly immune to them. But they are not the essence of the process.

In the practical evaluation of any technique it is important to study the misuses and abuses which the human being who employs it is likely to commit. Only in this way can we learn how to lessen their frequency. And certainly when such breaks in technique occur, any form of psychotherapy can come to resemble many other human interactions, such as persuasion, brain-washing, the private detective, the Peeping Tom, the prurient gossip, the district attorney pounding at a witness or at a defendant, or a parent who becomes either excessively angry or over-indulgent. Calling these resemblances to the attention of the psychotherapist can help him to be alert in their avoidance. But this has nothing to do with the scientific study of the process of psychotherapy as carried out with strict self-discipline and scientific precision. Even then psychotherapy has its unsolved intrinsic problems; but to confuse these with the problems which are created by ineptitude does not help to advance our knowledge. Even valid criticism of the *misuse* of any therapeutic procedure should not be used as an argument against its correct use; not if the critic or investigator is attempting to search out its essential assets and liabilities, rather than to exploit the limitations which arise not out of the nature of the process itself but out of the variable frailties of the human therapist.

I do not mean to imply that in the evaluation of any therapeutic procedure its vulnerability to misuse is unimportant. Indeed,

the history of pharmacology and of surgery has taught us that the narrower the margin of safety between use and abuse, the more frequently will any method miscarry. But whether we are studying pharmacology or surgical procedures or psychotherapy, the initial validity of the procedure must first be evaluated in terms of its optimal use. Once this has been established, we can attempt to judge the many practical problems which center around it. Among these, its liability to misuse will be of obvious importance.

No one can deny that every form of psychotherapy, psychoanalysis included, has a high vulnerability to error. But this is only a further reason for insisting that scientific studies must deal with scientific values and not with practical mishaps. The loose analogy between psychotherapy and brainwashing, with its prejudicial and emotionally supercharged connotations, has actually obscured important problems, and has thrown no light on the inherent strengths and weaknesses of psychotherapy.

Frequently the analogy has been used merely to grind an axe, *i.e.*, to prove that there is no such thing as psychotherapy, that it has no place in medicine, that it should be relegated to the social sciences and psychologies, that it should not be allowed to keep company with honest surgeons and internists. It seems to be easy for the so-called "organicist" to forget that for centuries no one was more vulnerable to error than these same pharmacologic and surgical colleagues. It is regrettable that from their own centuries of error they have failed to learn a greater humility, as they now consider psychotherapeutic processes which are barely a half-century old. It is even more distressing when our own psychiatric colleagues kowtow to the surgeon and to the pill-pusher by indulging in the same blindness.

REACTION TIME IN SCHIZOPHRENIC AND NORMAL SUBJECTS AS A FUNCTION OF PREPARATORY AND INTERTRIAL INTERVALS

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The reaction time (RT) of chronic schizophrenic patients has repeatedly been found to increase disproportionately with an increase in the length of the preparatory interval (PI)—the interval between warning signal and stimulus—under a "regular" procedure. (The PI is constant for a series of trials.) This has been attributed to the inability of the schizophrenic patient to maintain a high degree of set or preparation to respond for longer than a few seconds (1, 2). Shakow (4) has theorized that this inability to maintain a generalized set is due to the intrusion of "minor sets" into a situation in which a "major set" is called for, and that this is a fundamental source of behavioral deficit in schizophrenia. Since the RT situation reveals this phenomenon clearly, it seems important to determine which of the several aspects of this task contribute to produce such deficits in schizophrenic patients.

There is abundant evidence that the effect of the PI on RT in schizophrenic patients is dependent not solely on the length of the PI, but on the context of PIs as well (3). At least two examples of this influence of context on schizophrenic subjects are pertinent to the present research. First, in two studies in which the regular procedure was compared with an "irregular" procedure (the PI varies irregularly from trial to trial), RT for long PIs under the irregular procedure was not only faster than that for the same long PIs in the regular procedure, but also approached the level for the *shorter* PIs under the regular procedure (2, 5). This would appear to show that the poor maintenance of a preparatory set by schizophrenic *Ss* does not occur in the case of a single long PI in a context of shorter ones, and suggests that it is dependent upon some property of a *series* of long PIs. A second relevant finding (6) is that RT in series of trials with short PIs was lengthened considerably for schizophrenic *Ss* if these trials were preceded by series of trials with longer PIs. Thus, series of trials with long PIs affect not only RT in that series but performance on subsequent series of trials as well, even when the subsequent series provides what is ordinarily a more favorable condition.

There would seem to be at least two aspects of a series of long PIs that could produce such deficiencies in performance. One, usually given primary importance, is the individual long interval for which *S* must repeatedly maintain a set. According to the theory proposed above, this may permit the intrusion of minor sets which interfere with the major set required for optimal performance. However, another property of a series of long PIs taken as a whole is that the external stimuli provided by the experimenter are widely spaced—that is, the tempo of events is relatively slow. This general slow pace of stimulation might influence *S* to respond in a similarly slow manner. Thus, this latter aspect of the situation, instead of or in addition to the set factors, might be responsible for the slow RT generally found under long PI conditions.

The present experiment was designed to test whether a long interval between reactions to the stimulus—merely a slow pace of

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events—is in itself conducive to the schizophrenic's disproportionate slowness in RT, or whether the deficit is due largely to his having repeatedly to maintain readiness for a long period. These alternatives are tested by comparing RT under a condition involving a quick tempo and short PI with that obtained under two conditions both involving a slow tempo of events but differing in the length of the PI. The first of these is the usual "long PI" condition in which the interval between *S*'s reaction on one trial and the warning signal for the next trial (intertrial interval: ITI) is relatively short. In the other condition, the time between reactions is approximately the same as in the first, but the ITI is long and the PI is short.

A secondary aim of the present study was to test for sequential effects of the two "slow tempo" conditions on one another in an attempt to extend the findings of Zahn *et al.* (6).

METHOD

Subjects: Thirty-two schizophrenic and 14 normal *S*s were studied. On the basis of previous experience we judged that *S*s not meeting the criterion of a mean RT of below 400 msec. on one of the experimental conditions providing the optimal situation (short PI, short ITI) had an unduly high probability of giving unreliable results. Therefore, the results for only the 26 patients who met this criterion are included.

The patients were chronic, coming from a large public hospital. They had not had ataractic drugs for more than two months. The mean age of the patient group was 36.6 years (range: 20–52); mean length of hospitalization was 8.2 years (range: 1–19); mean education was 10.0 years (range: 4–15). Eight *S*s were women. The normal *S*s were hospital employees of a wide range of occupations. The mean age of this group was 33.3 years (range: 23–52); mean education was 14.8 years (range: 12–20). Ten of the control *S*s were women.

Apparatus: The standard RT apparatus employed by this laboratory was used: a telegraph key requiring very light pressure to depress, a signal generator, amplifier and speaker for producing a 70 db (re .0002 dynes/cm^2), 300 cycle tone, three "silent" Hunter interval timers, a yellow signal light, and a Hunter "Klockounter" as a timing device.

Procedure: The experimenter initiated each trial by saying, "Ready." *S* then depressed the telegraph key, thereby initiating the PI. *S* responded to the RT stimulus (tone) by lifting his finger from the key. He had been instructed to do this as rapidly as possible. When *S* responded, the tone and Klockounter stopped and a yellow signal light observed by *E* came on. This was controlled by a timer to indicate the length of the ITI. When the yellow signal light went off, *E* said "Ready" to initiate the next trial.

Each *S* was tested in each of two sessions on the same three conditions:

1) Short ITI (4 sec.) and short PI (2 sec.)—(SI-SP)
2) Long ITI (14 sec.) and short PI (2 sec.)—(LI-SP)
3) Short ITI (4 sec.) and long PI (12 sec.)—(SI-LP)

Each *S* received a (regular) series of 11 trials on each condition. However, the first trial in each series is omitted from the analyses. A one- to two-minute rest period elapsed between series.

The three conditions occurred in two different orders of presentation:

Order 1: SI-SP, LI-SP, SI-LP
Order 2: SI-SP, SI-LP, LI-SP

Approximately half of the *S*s were given Order 1 in the first session and Order 2 in the second session. For the other half, the sequence of orders was the reverse. At the beginning of the first session, after the RT procedure had been demonstrated, each *S* was given at least ten practice trials, or as many more as were needed either to bring *S* to a fairly stable level of performance or to

determine his unsuitability as an experimental S. Before the second session, S was given at least six practice trials.

RESULTS

Figure 1 presents the mean RTs for the three conditions and the two orders of presentation. The main concern of this paper is with the difference between the SI-SP condition and the LI-SP condition when the latter condition follows immediately after the SI-SP condition (Order 1).[2] For neither patients nor controls did the LI-SP condition produce an appreciable increase in RT in Order 1. The SI-LP condition, on the other hand, when it came second in the series (Order 2), produced slower RT, compared with the SI-SP condition, in both schizophrenic and normal Ss. The patients, however, showed a much greater decrement in performance than did the normal Ss. The decrement produced by the SI-LP condition was significant for the patients ($p < .01$) but not for the controls (p about .10).

An analysis of variance of the SI-LP minus SI-SP difference scores for Order 2 shows that the difference between these two conditions is significantly greater for the patients than for the controls. This replicates the results of previous experiments, and indicates that comparable conditions have been met in the present experiment. It therefore adds emphasis to the finding that the LI-SP condition produces virtually no increase in RT.

Another and somewhat more stringent test of the main hypothesis of the study is the comparison of RT under the LI-SP condition with that under the SI-LP condition when these conditions followed directly after the SI-SP condition. Means based on this comparison along with statistical analyses of them are given in Table 1.[3] These show that the two conditions produced different results for the patients but not for the controls. Further, an analysis of variance comparing the two groups shows that the difference between them is significant ($p < .05$).

The mean of an RT distribution may give a somewhat "distorted" picture because of the influence of a few extremely long reactions. As a check on this possibility, anal-

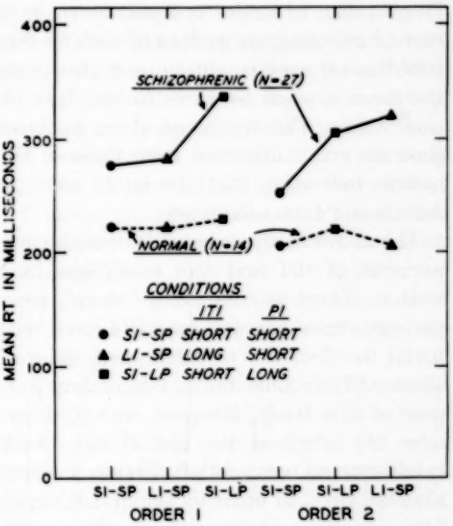

FIG. 1. Mean RT for the three conditions and two orders.

TABLE 1

Differences in RT in Milliseconds Between the SI-LP and LI-SP Conditions When They Followed Directly After the SI-LP Condition

Group	Sequence of Sessions	Mean	S.D.	t	p
Schiz.	Order 1 First	41.1	48.3	3.07	$<.01$
	Order 2 First	52.3	73.4	2.57	$<.05$
	Mean	46.7	60.4	3.94	$<.001$
Normal	Order 1 First	32.8	40.9	2.27	$<.10$
	Order 2 First	−0.4	41.1	−0.02	—
	Mean	18.6	42.9	1.62	—

Analysis of Variance, F (groups) = 5.36; df = 1,36; $p < .05$.

[2] The SI-LP and LI-SP conditions were compared with the SI-LP condition given in the same experimental session. These difference scores were used to attempt to eliminate the effects of session-to-session variability, often extreme in schizophrenic patients.

[3] The means represent the difference between difference scores as described in footnote 2.

yses similar to those reported above were carried out using the median of each *S*'s distribution on each condition, and also using the mean of each *S*'s three fastest RTs on each series. The results of these analyses show no great difference from those of the means, indicating that the latter measure reflects the data adequately.

The above analyses have dealt with comparisons of the first two conditions in a session. These are the only "clean" comparisons, since series of long PIs have been found to affect RT to subsequent series of shorter PIs detrimentally. A secondary purpose of this study, however, was to determine the effect of the SI-LP and LI-SP conditions on one another. Figure 1 shows that the effect of order on the SI-LP condition, in terms of its difference from the SI-SP condition, is negligible. For the schizophrenic group, however, the LI-SP condition produces significantly slower RT when it follows SI-LP than when it follows the SI-SP condition ($p < .05$). This is not true of the normal *Ss*, and the difference between groups in this regard is significant ($p < .05$). Thus the findings of the earlier study (6) are extended by showing that, for schizophrenic patients, performance on a series of trials with long PIs detrimentally affects an immediately following series of trials with short PIs, even when these are in the context of long ITIs. Unfortunately, the experimental design did not permit the testing of the effect of a series of LI-SP on a series of SI-SP trials.

DISCUSSION

The results seem to provide an answer to the main question of this paper: within the range used, a slow tempo of stimulation in itself is not enough to produce an appreciable decrement in the performance of schizophrenic patients or normal controls. For both groups, RT remains relatively stable on trials with short PIs, regardless of whether the trials are paced quickly or slowly. Further, the patients are significantly better under both of these conditions than under a condition which contains a long PI. Thus *Ss*' performance deficit in series of trials involving long PIs does not appear to be due to the fact that the condition merely involves extended periods of time during which no special environmental stimuli occur—or at least are provided by *E*. Rather, it appears to occur specifically in those periods in which preparation for response is called for. This supports the previously proposed view, that the deficit under long PI conditions manifested by schizophrenic *Ss* is in fact due to their inability to maintain a high level of preparation for more than a few seconds.

Shakow (4) has theorized that the inability of schizophrenic *Ss* to maintain a "major" (generalized task-relevant) set for an extended period is due to the intrusion of "minor" (irrelevant) sets. These minor sets may be derived from some internal or external stimulus, the latter perhaps being an irrelevant part of the task at hand. In terms of this viewpoint, the disproportionately slow RT shown by *Ss* on the SI-LP condition would be considered to be due to the intrusion of these interfering minor sets during the relatively long wait before the stimulus. In the LI-SP condition, however, no decrement in performance occurred in spite of an equally long period of elapsed time. How can this be accounted for? One possible hypothesis is that minor sets *were* adopted during this period, but were dispelled by the warning signal. However, evidence in a study reported from this laboratory (6), and another by the same investigators, soon to be published, indicates that either a single long PI or a series of long PIs leads to a decrement in the performance of schizophrenic *Ss* on subsequent trials under more nearly optimal conditions. The present study has adduced similar evidence in the decremental effects of the SI-LP condition for the patient group. It seems, then, as though minor sets which occur during a long PI are not easily dispelled by subsequent external stimulation. It therefore seems more probable that mi-

nor sets, of a pervasive nature at least, were not established at all during the long ITI. This would tend to indicate that establishment of minor sets in the schizophrenic during series of trials with long PIs is a function of the demands made on him by the situation to maintain a major set for a relatively long period. When no such demands are made, as is the case during the ITI, no minor sets of appreciable tenacity seem to be developed. Looked at in this way, the development of such minor sets could be considered as serving the defensive purpose of protecting the patient from being overloaded in situations that for him have difficult requirements.

Another possible explanation of the equality of the SI-SP and LI-SP conditions is based upon the assumption that two opposing factors are at work in this situation. One is the reactive inhibition produced by the RT response. This would be expected to dissipate itself to a greater extent in the LI-SP condition and, other things being equal, to produce faster RT in this condition. The other factor is the effect of the slower tempo of events originally assumed to be of some importance, or perhaps the greater intrusion of minor sets in the LI-SP procedure. The effect here would be in slowing RT. It is just possible, of course, that both of these factors operate in such a way that they cancel each other out. Although it would seem unlikely that the values of the parameters chosen for the present conditions just happened to be the ones to produce a cancellation of effects, this hypothesis is at least a logical possibility. Merely on grounds of parsimony, however, the first hypothesis seems preferable.

SUMMARY

The hypothesis tested by this experiment is that the disproportionately long simple RT customarily given by schizophrenic *Ss* in a series of trials with relatively long preparatory intervals (PIs) is a function of the slow tempo of events in such long PI series. The RTs of schizophrenic and normal *Ss* were compared under a "usual" long PI condition with those under a condition in which the tempo of events was the same, but the intertrial interval (ITI) was long and the PI short. The results showed that RT under the long ITI-short PI condition was virtually identical with that under an "optimal" short ITI-short PI condition for both groups, and significantly faster than the short ITI-long PI conditions for the patient group.

The data indicate that the deficit under conditions of a long PI shown by the schizophrenic *Ss* is due specifically to the relatively long period of preparation required of *S*, rather than to the slow tempo of events. The results are interpreted in terms of the hypothesis that a "major" (task-relevant) set is interfered with in schizophrenic *Ss* by the intrusion of "minor" (irrelevant) sets. The data obtained here suggest that such minor sets are a function of difficult demands placed on the patient by the task, and are not occasioned to any great extent merely by the passage of time.

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THE RELATIONSHIP BETWEEN TYPE OF THERAPY RECEIVED AND A PATIENT'S PERCEPTION OF HIS ILLNESS

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A patient admitted to a neuropsychiatric hospital may offer several reasons for his being there, and some opinions as to the type of treatment he should receive. The reasons offered can be assumed to be partial expressions of the patient's perception of himself. Although such statements, especially from psychotic patients, may show disordered perception, they still represent attempts on the part of the patient to make sense out of the situation in which he finds himself. The statements may also help the staff to understand the patient, and to anticipate the degree of co-operation in treatment (3).

For example, it is not unusual for a psychotic person to complain that he sees no need for any treatment whatever. That this is a differential remark is indicated by his description of the other patients—they are "a little odd." On the other hand, some patients voluntarily seek treatment for psychiatric disorders, and see themselves as one of a group of patients with similar reasons for hospitalization. It seems reasonable to suppose that such contrasting kinds of patients will not co-operate with a typical therapist to the same degree (8).

The perceptions held by two participants—a therapist and a patient receiving therapy—give structure to the interpersonal relationship which develops in the treatment situation. Sometimes these perceptions are sufficiently congruent to permit effective communication. When they are not, changes in perceptions may be one of the early concerns of treatment. The meanings of illness for both participants are especially important where psychotherapy is used. Furthermore, definite preparation of the patient for psychotherapy may be required early in the treatment process. Mignot (6), in speaking of the necessity for co-operation with the therapist, emphasizes that the hospitalized psychotic patient presents a distinct problem in motivation not recognized by all therapists (5).

This paper reports on the classification of the meanings of illness for schizophrenic patients and the measurement of changes in their perceptions. It is based upon a study of three groups that participated in different types of treatment programs in a neuropsychiatric hospital setting. Each group differed in the duration of stay in hospital prior to the date of the study interview. The first group consisted of the "least hospitalized patients," that is, those whose current admission was briefest; the second group, the "moderately hospitalized patients," and the third group, the "most hospitalized patients."

CHEMOTHERAPY GROUP

The first part of the study was concerned with a possible change during chemotherapy. Does chemotherapy without psychotherapy foster more realistic perception of hospitalization by patients? To answer this question, 24 newly admitted schizophrenic patients under 50 years of age were interviewed prior to the start of chemotherapy and again after four weeks of treatment. The reasons given at the time of admission for their own hospitalization and for the hospitalization of their fellow patients were compared with those given after four weeks of treatment.

Method: Each subject was given a standardized interview by a clinical psychologist, who asked 14 questions. The replies were recorded verbatim, and prompting was

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restricted to repeating the question, asking the subject to say more, or repeating unclear statements of the subject to secure replies that could be scored.

Eight of the questions were critical for the present study, and six provided information on general orientation. The eight critical questions elicited the following information from a subject: 1) his reasons for his hospitalization; 2) his reasons for the hospitalization of other patients on his ward; 3) a description of the type of treatment he was receiving. The other questions, as measures of general orientation, concerned the name and location of the hospital, and the duties of the doctor, nurse and aide.

Scoring: Reasons given by a subject for his and other patients' hospitalization were scored by using two categories: "functional" and "non-functional." A functional score reflected psychologic factors in the patient's response. Examples in this category are such remarks as "mixed up," "no control of thinking" and "loss of lust." Reasons rated as non-functional included such organic complaints as "lung condition" and "cracked feet"; other non-functional reasons implied that the patient was being punished for a crime, or was being held without adequate explanation. The verbatim statements of the subjects were rated independently by two clinical psychologists, who agreed in 98 per cent of their judgments.

Results—Chemotherapy Group (least hospitalized patients): The results from this part of the study are shown in Table 1. Before treatment, 71 per cent of the patients in the chemotherapy group gave functional reasons for their own hospitalization, and 79 per cent gave similar reasons for the hospitalization of their fellow patients. After four weeks of chemotherapy there was one significant change: the percentage of patients giving functional reasons for their own hospitalization declined from 71 to 33. This change was statistically significant ($p < .05$). The patients who felt better, as well as those who did not report improvement, gave a variety of reasons for their hospitalization. It does not seem plausible that the relief of symptoms due to chemotherapy could alone account for the changes in response, since some of the patients who felt better offered functional reasons both times. It is noteworthy, however, that there was not much change in the percentage of subjects giving functional reasons for the hospitalization of their fellow patients.

TABLE 1

*Chemotherapy Group**

Percentage of Patients Who, Before Treatment and After Four Weeks of Treatment, Gave a Functional Condition or Illness as the Reason for Their Own and for Other Patients' Hospitalization

	Self (%)	Other Patients (%)
Group 1 Before	71	79
Group 1 After	33	88
Change	38†	9

* $N = 24$ least hospitalized patients.
† $p < .05$.

Almost all of the chemotherapy group knew the name and location of the hospital, and gave consistent accounts of the duties of the staff personnel: the nurse dispensed the medications and supervised the aides, the doctor on the ward examined and treated the patients. To all of these subjects, the term "treatment" meant the medicine received.

PSYCHOTHERAPY GROUPS

The second part of this study was an attempt to clarify the meaning of the change found in the chemotherapy group. Do such self-perceptions of non-functional illness occur after a period of time in any group of hospitalized patients?

For understandable reasons, it was not possible to find a group of comparable patients that had been without any planned treatment for an equal period of time. Hence a group of schizophrenics who had

received psychotherapy in addition to chemotherapy was found and interviewed once. The group included 19 subjects who had had, on the average, seven months of psychotherapy prior to the interview. The average length of hospitalization was 1.8 years.

In addition to the standard 14 questions, one question was asked about "psychotherapy." The extra one was designed to determine the meaning of psychotherapy for each subject. A reply was scored positively when the subject indicated, in effect, that repeated verbal interactions between a patient and a staff member were a form of treatment.

Results—First Psychotherapy Group (moderately hospitalized patients): The results for Group 2 are shown in Table 2.

This group differs from the chemotherapy group in self-perceptions but does not differ in perceptions of other patients. The change in self-perceptions occurring during four weeks of treatment in the chemotherapy group therefore may not be a necessary consequence of merely being in the hospital.

After four weeks of treatment, two-thirds of the chemotherapy group did not see themselves as hospitalized for functional reasons. After seven months of treatment, all of the psychotherapy group saw a functional illness in themselves. When interviewed a second time, only part of the chemotherapy group gave reasons which implied that they felt well and should not remain in the hospital. Both groups gave appropriate reasons for the hospitalization of their fellow patients.

To determine whether admitting to a functional illness could be a consequence of psychotherapy, an additional group of schizophrenic patients was selected. This group had spent an average of ten months in psychotherapy prior to the interview, and had also received chemotherapy. It was composed exclusively of chronic patients whose average length of hospitalization was 9.4 years.

Results—Second Psychotherapy Group (most hospitalized patients): The results for Group 3 are shown in Table 2. This chronic group resembled the chemotherapy group in their self-perceptions, but differed from the other two groups in their perceptions of other patients. More than half of the chronic group did not see themselves or their fellow patients as hospitalized for functional reasons. Thus this second psychotherapy group differed markedly from the first psychotherapy group in their admitting to mental illness.

Both of the groups receiving psychotherapy were asked about the meaning of psychotherapy. Seventy-nine per cent of the patients in Group 2, with less than two years of hospitalization, described psychotherapy as an activity related to treatment. Only 37 per cent of the patients in Group 3, with more than nine years of hospitalization, related psychotherapy and treatment. Furthermore, only 16 per cent of the patients in Group 3 mentioned psychotherapy as a form of treatment being received. Comparable data from Group 2 were not computed, since several patients in this group had recently stopped attending therapy sessions. A clear majority of patients in the two psychotherapy groups reported medication as the form of treatment being received.

The responses to the questions on general orientation did not yield consistent differences between the psychotherapy groups

TABLE 2

Psychotherapy Groups

Percentage of Patients Within Each Group Who Gave a Functional Condition or Illness as the Reason for Their Own and for Other Patients' Hospitalization

	Self (%)	Other Patients (%)
Group 2 (N = 19 moderately hospitalized patients)	100	100
Group 3 (N = 19 most hospitalized patients)	32	47

and the chemotherapy group. The name and location of the hospital were given correctly and the duties of the staff were described realistically by the majority of patients in each group.

RESULTS

The chemotherapy ("least hospitalized") group after weeks of chemotherapy, and the second psychotherapy ("most hospitalized") group, after months of chemotherapy, did not give functional reasons for their own status as psychiatric patients; the first psychotherapy ("moderately hospitalized") group did.

The least hospitalized group saw functional reasons for the psychiatric status of other patients, whereas the most hospitalized group did not. In this respect, the least hospitalized group resembled the moderately hospitalized group.

The least hospitalized group prior to chemotherapy was like the moderately hospitalized group in perceiving accurately why they and other patients were on a psychiatric ward. These two groups differed from the most hospitalized group, which tended not to give functional reasons for the psychiatric status of all patients.

For all of the groups, the term "treatment" meant "medication" but not psychotherapy.

DISCUSSION

The exclusive use of chemotherapy apparently fostered the perception of non-functional illness in the patients of two groups. The regular giving of pills was a potent non-verbal communication from the staff to these patients. This was especially influential in the group that was not given psychotherapy until long after chemotherapy had been started. Most patients in the moderately hospitalized group were involved regularly in pill transactions. They also talked frequently about their functional problems and their relationships with other people. Psychotherapy sessions, beginning shortly after the start of chemotherapy, probably de-emphasized the somatic meaning of the daily pill-centered messages. Moreover, these participants in psychotherapy discussed their feelings toward themselves and other people, rather than their bodily condition or remote, impersonal matters (2, 4).

The most hospitalized group was eventually given psychotherapy as well as medication. However, their reinforced perceptions of non-functional illness were not readily unlearned during months of guided verbal sessions. In most of this relatively asocial group, years of receptive orality, with focus on food and pills, could not be much modified by the efforts of the staff.

The most hospitalized group had generalized the learned inaccurate perceptions of their own illness, which may perhaps explain their failure to see that other patients were on a psychiatric ward for functional reasons. They may have generalized the learning gained through chemotherapy so that their perceptions were also applied to other patients. This could have occurred when, years ago, they failed to discriminate sufficiently between themselves and their hospital peers. They had probably learned similar perceptual reactions to all their peers.

The least hospitalized group, prior to chemotherapy, did see accurately the functional reasons for the psychiatric status of themselves and other patients. At that point, part of the staff had made them conscious, through the verbalizations in the diagnostic procedures, of their emotional problems and interpersonal disorders. The potent, pill-centered communications from staff to patients had not then started. Thereafter this informal learning process was begun, and four weeks later it resulted in a significant shift away from perceptions of functional illnesses in themselves (7).

Perhaps some of the above inferences will become hypotheses for well controlled future studies of hospitalized schizophrenics.

In this study the controls exercised in selecting patients for the three groups were less than ideal; it was impossible to equate the groups as to social class, verbal intelligence and other variables relevant to treatment effects. It was, of course, also disappointing that two of the groups could not be studied longitudinally. In a future study, both pre-treatment and post-treatment interviews would be especially desirable in a group selected for psychotherapy by the same criteria as the one selected for chemotherapy. Also desirable would be an investigation of the semantics of "psychotherapy" as evidenced by the responses of both patients and staff members. Whether it is "treatment" or not, how does psychotherapy rank in order of importance with chemotherapy and other therapies and activities (1).

CONCLUSIONS

Some of the relationships between type of therapy received and a patient's perception of his illness in a neuropsychiatric hospital may be unfortunate. Chemotherapy can facilitate undesirable learning in certain patients who would otherwise remain realistic or vague about the reasons for their hospitalization. Chemotherapy can result in strong denial of interpersonal difficulties and functional reasons for hospitalization. Even when tranquilizers have reduced pathologic symptoms and increased the ability to cope with specific realities, this denial and distortion of a patient's prehospital history may persist. Such denial and distortion will not lead to maximally effective treatment with individuals who are able to learn perceptions of people more congruent with the consensually valid views of the staff.

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THE ANALYSIS OF GUILT AND NARCISSISM

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METHODOLOGIC CONSIDERATIONS

In any objective survey of clinical psychoanalysis one significant feature emerges. In sharp contrast to clinical medicine, with its absence of any general theory of disease and health and its truly inspiring triumphs in empirical practice, psychoanalysis has been long on theory and short on therapeutic advance since its founding by Freud. Reasons for this deficiency should be freely sought, since the stagnation of any science, particularly a new one with a broad focus, is an unhealthy sign and one calling for critical re-evaluation of its methodologic problems.

The history of psychoanalytic therapeutics can be divided into two major periods: the analysis of the unconscious and of resistances in an effort to uncover repressed wishes and thereby to bring about the recollection or reconstruction of the infantile amnesia; and the analysis of ego defenses as a means of achieving this. The second era began with Freud's reconceptualization of psychic processes, in *The Ego and the Id* (4), and Anna Freud's *The Ego and the Mechanisms of Defense* (3). This reconceptualization of psychoanalytic theory was meant in part to help the analyst to focus his efforts upon those forces and factors creating pathologic repressions and defenses. The id or unconscious instinctual transformations being universal, the crux of neurotic symptom formation would appear to be the construction by the patient of pathologic repressions and defenses against these strivings.

Unfortunately, after about a quarter-century of focusing on ego psychology, no great advance in therapeutic efficiency can be unequivocally demonstrated, as was suspected by Glover (10) at its inception. The principal effectiveness of psychoanalytic therapeutics remains what it had been before the advent of this reconceptualization, and the overemphasis on ego psychology frequently worsens therapeutic efficiency. As Hoffer (11) points out, "... the indiscriminate interpretation of defenses raises more defenses," thus impeding rather than facilitating therapy.

At the same time, it must be recognized that the concept of defenses arising out of the activities of the ego has resulted in conceptual clarification and simplification. The question inevitably arises as to why this increase in conceptual clarity has not resulted in the expected increase in therapeutic efficiency—for the final and real test of the validity of any therapeutic concept is its ability to modify the reality it claims to define. From a pragmatic or operational point of view, the delimitation of the psyche into id, ego and superego, with the ego's defensive operations against the id as the key to the neurosis, does not seem to add to the therapeutic yield achieved by the old formulation of repressed instinctual impulses, derived from the earliest period, manifesting themselves in neurotic symptoms.

One of the reasons for this has been the conceptualization of defenses as something primary, elemental and causative of disease in the psychic apparatus. Actually, defenses are as universal as instincts and, as Hoffer (11) quotes Anna Freud as pointing out, are essential for normal functioning. Further, defenses within the ego are primarily derived from and acquire their energies from the id and the superego. Regression gratifies archaic instinctual patternings (id); repression and reaction-formation fulfill the commands of guilt (superego); introjection fulfills orality; projection is derived from the

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primordial effects of sensory impressions identifying externality (Sherrington's "projicience" (15)); isolation, undoing, turning against the self and reversal are motivated as much by guilt as by narcissism. Therefore, to analyze defenses it is necessary to analyze the id or the unconscious, as well as the repressive forces or superego—which leads psychoanalysis right back to where it started!

Nevertheless, intermediary links have been delimited between the various psychic institutions involved in the instinctual conflicts which characterize neurosis. And we know that these can be of great value, if the total picture is kept in mind. One of the great occupational hazards of psychoanalysis is the urge for oversimplification which causes the analyst to focus on fractions of the mind and thereby to become oblivious of the rich variegation of psychic activity. In actual practice, the analyst is swamped by the vast sea of psychic activity, and certain simplifications are essential if he is to navigate. Thus, some mediation between simplification and a rigorous empiricism is necessary. Although he must follow the patient's stream of activity, the analyst must also interpret in the light of what seems to be of greatest importance in symptom formation or psychopathology.

The problem of therapeutic advance has been made more acute by the acceptance into analysis of patients whose disturbances are more in the nature of a personality disorder than the clear-cut hysteria, phobia or obsessional neurosis for which the technique of psychoanalysis was originally designed. These patients—who by now far outnumber those with a clearly defined, classic neurosis—are chiefly individuals whose repressive or defensive forces have been overdeveloped and, instead of being directed toward specific repressed instinctual strivings producing conversions, displacements and reaction formations, are directed more diffusely at impulses toward object relations in general. Therapy for these patients calls for an approach which will help to diminish defenses generally, and much of the stress on "ego analysis" has been in the hope of attaining these ends.

In addition to the above-mentioned defects in the defense analysis conceptualizations, a major deficiency has been the obscuring of the motives behind defenses in the excessive fixation on this area of the psyche. For it should always be kept in mind that pathologic defenses against instinctual strivings are perimeters on the battlefield of psychic conflict, maintained mostly by the instinctual forces of the superego, *i.e.*, guilt and narcissism. Therefore, to diminish their excess, to reduce their energies to normal proportions, their "supply lines" must be interrupted. This can be done only through the historical reconstruction of the structuring of guilt and narcissism through the individual's life, from adulthood back to adolescence to latency and early childhood. One frequently gets the impression that defenses are analyzed without full regard for the excessive guilt and narcissism involved in keeping them overactive.

A major feature in each neurosis is that the patient both feels guilty about and has his narcissism fixated on the pleasures of infantile and childhood states of mind and fantasies—the same psychic material the normal person passes over with but a slight reaction. In this sense, a neurosis is due neither to the id nor to the ego defenses (which are universal), but to guilt and narcissism hypertrophy, which creates pathologic defenses and thus prevents normal id discharges. Therapeutic success therefore demands that the forces of guilt and narcissism be mobilized and thoroughly analyzed, along with the other major formations.

Thus from considerations arising from the structure of the psyche, from the failure of pure ego defense analysis to advance our therapeutic efficiency, and from the special demands of the problem-personality patient arises the need for a more effective approach to the problem of guilt and narcissism. The

importance of the superego and guilt in the construction of defenses has been generally recognized in the literature, but techniques are urgently needed for more effectively diminishing this influence, particularly in its manifestation as the negative therapeutic reaction described by Freud in *Inhibitions, Symptoms, and Anxiety* (5). Narcissism, on the other hand, has been a concept applied chiefly and in a more or less hopeless manner to schizophrenics and psychopathic personalities; and methods to diminish or analyze its influence in the neurotic patient have not been systematically defined. These two mechanisms, guilt and narcissism—the major counter-instincts responsible for the emergence of man (16), or the drives opposed to the primary instincts in man of eroticism and aggression—are the key to improved psychoanalytic therapeutics.

It must be borne in mind that the keystone of analysis is the classic uncovering of the repressed impulses, and the recollecting or reconstructing of early childhood development, for these are the foci of the excesses of guilt and narcissism. Any effort to analyze guilt and narcissism as separate entities, torn out of the context of psychic development, can lead only to sterile psychologizing and theorizing, which do little to help the patient.

THE ANALYSIS OF GUILT

The psychoanalytic literature describes a wide variety of intricate and subtle mechanisms responsible for the overdevelopment of guilt. It has perhaps been insufficiently stressed that many patients succeed in suppressing and repressing guilt, in an only too human effort to achieve gratification and to make life more pleasant. This frequently causes this institution to suffer as much distortion and displacement as erotic impulses. Its inconvenience and its tendency to disturb certain types of social effectiveness make it an important institution to inhibit.

One sometimes needs as much hyperacousia to guilt derivatives to mobilize and analyze this faculty and thus to expose its developments and influence as one needs with the sadism of a compulsively nice, polite individual. Guilt frequently becomes completely obscured by returns of the repressed, narcissistic developments, elaborate defenses and denials which must be analyzed if the guilt is to be mobilized. It should always be borne in mind that, whereas the instincts grant the individual pleasure, guilt reverses the healthy current of instinctual discharge into *un*pleasure, turning the natural impulses of the individual into sources of self-torment. For this reason, many patients treat guilt as they would a traumatic experience, with repression and various forms of denial.

One of the most important considerations in the analysis of guilt is the attitude of the analyst toward the patient. Most patients who suffer excessively from feelings of guilt are insatiable in their conscious and unconscious demands that the analyst assuage the feelings immediately rather than help to analyze them. They demand warmth, affection and approval from the analyst, demands he frequently meets by some relaxation of the rules of detachment. Such apparently innocuous behavior as smiling, calling the patient by his first name, or other means of indicating approval or friendliness, helps to relax the tension of the session, but also helps to relax and to keep unanalyzed the guilt which creates the tension in the session and in the patient's life.

Further, a major source of guilt is obscured by the inability of an approving analyst to have clearly projected on him the images and attitudes of the disapproving parents, who frequently regard their children as miserable creatures who can be reared only by a barrage of punishment and rejection. The projection of the superego onto the analyst, as described by Nunberg (13), or the image of the parents may be true or a fantasied reconstruction or distortion of the realities of the parents. Which-

ever it is, it cannot be analyzed if the analyst succumbs to the all-too-human temptation to step into the role of the "good" mother (or father) in opposition to the "bad" mother (or father). The chronic negative transference of the guilty patient, a valuable development in moderation, causing the patient to dislike the analyst because he feels the analyst disapproves of him, cannot be analyzed to advantage if the analyst indicates approval.

At the same time, it must be recognized that the emotional detachment necessary to analyze the transference aspect of guilt may in itself help to intensify guilt. The detached analyst may be a reincarnation of an indifferent or disinterested parent, or the rejecting objects from which the patient's guilt and masochism derive great pleasure. The analyst, in his id interpretations, or his descriptions of infantile sexual cravings—oral, anal, perverse genital—may be merely a reincarnation of the parents who hurled derision, contempt and punishment upon the child for these same drives. These complications of the necessary detachment must be sharply watched for and thoroughly analyzed to prevent the analysis from intensifying guilt by providing the patient with another rejecting derisive object who seems to be rubbing the patient's face in the mire of his unconscious. The analyst must also check carefully the possibility that he is achieving a sadistic satisfaction in hurling "scientific obscenities" at his patient.

One of the outstanding characteristics of the child, nicely revealed by Piaget's *The Moral Judgment of the Child* (14), is his tendency to moralize from every experience. A similar tendency is found among primitives. In our culture, such hypermoralizing has become quite unfashionable and, in many ways, severely detrimental to ease in "interpersonal relationships" or in "winning friends and influencing people." Powerful forces are at work in our patients to repress guilt, not only so that they may enjoy the pleasures of the id, but also so that they may more easily get along in a world where moral forces have been systematically derided, often designated as mere "conventions," bourgeois Victorian nonsense. Many patients have developed strong defenses against any full awareness of their own sense of guilt. Such defensive denials may be associated with the longing to identify with the psychopathic, the criminal or the egomaniacal.

It therefore becomes essential that the analyst be on the alert for symptomatic guilt (frank and avowed guilt frequently being denied). The mechanisms for displacing repressed guilt are varied; many have been described in the literature. Most have narcissistic, aggressive and libidinal gratification values which have to be separated, clearly demonstrated and traced to their origins if release is to be achieved.

In addition to the many guilt mechanisms already described, two complexes which may be delimited are 1) the rejection compulsion, and 2) the martyrdom thrill.

THE REJECTION COMPULSION

Derived from a variety of erotic and narcissistic sources is a general human urge—almost so commonplace as to make its mention trite—for love and acceptance. All humans have a powerful and urgent need to be loved and accepted. Achievement of this goal is one of the major aims of psychoanalysis, since, in the majority of patients, this drive becomes so severely blocked that the opposite is achieved, and social isolation and alienation result. In most patients, some mixture of acceptance and a love relationship is found fused in an uneasy truce with rejection and lovelessness. In all neurotics the drive for rejection constitutes a problem perhaps as important as the Oedipus complex.

Both aggression (removing objects) and narcissism (refusal to accept the irritations and the limitations on egoism of a real love relationship), as well as masochism, and

anxiety regarding the deeper unconscious meanings of love relationships—all these contribute to the rejection compulsion. But the main source of this pattern is derived from a deep and pervasive sense of guilt which destroys or taints all love relationships. Patients with a powerful rejection compulsion remind one of the anchorites who remove themselves from society to excoriate themselves and expiate their sins. The difference is that our patients dwell in society as *outsiders*, dressed normally, and undistinguishable outwardly from the more fortunate *insiders*, except for their self-excoriations, manifested by frustrated and painful relationships with love objects.

The existence of such a rejection compulsion is usually denied by rationalizations, including misinterpretations of the behavior and attitudes of the persons who were rejected by or who rejected the patient. It is essential in analyzing this complex that its existence be clearly demonstrated in its active and passive phases. Both the desire to reject and arrangements for the object to reject must be pointed out in their various and frequently subtle details. Such a drive for rejection is clearly contrary to the craving for love and acceptance which becomes in many so clamorous and insistent that it drowns out any awareness of the mechanisms involved in its own self-defeat.

The unconscious complex hypertrophying guilt which seems most potent in producing the rejection compulsion is the negative Oedipus complex, particularly the desire to kill and eat the mother. Klein (12) has demonstrated how active and disturbing this drive is in children. Although Freud (4) describes the negative Oedipus complex, its full implications in neurotic symptom formation have not been systematically explored. An all-pervasive guiltiness, expressed in an unconscious need to break object relationships, arises from a deep sense of guilt about the primary one—with the mother—upon which subsequent developments are based. Matricidal drives, in both males and females, cause the individual to feel and act unworthy of love and acceptance as a derivative of a powerful guiltiness about the first and primordial love object.

It should be remembered that, whereas Oedipus was able to expiate his sin by his symbolic castration, Orestes could not be relieved of his guilt until Athena, appropriately the motherless goddess, over wide protest cast her ballot for his release from the avenging furies of his mother (the *Eumenides* of Aeschylus). Oedipus ends as somewhat of a hero, Orestes as a contemptible object, since replacing the father is the duty of every virile son, but killing the mother who created and suckled him is a clear-cut act of suicide, permitting no full expiation except a life of chronic suicide as atonement for this monstrous crime. The problem is similar with neurotic patients. The *positive* Oedipus complex can be more easily apprehended and analyzed. The *negative* Oedipus complex—going back to the earliest pre-Oedipal infantile period—is more difficult to apprehend and reconstruct, but its analysis is essential to relieve the chronically and excessively guilty patient who, like Orestes, can find no expiation or release from his guilt except in his neurotic symptomatology.

The negative Oedipus complex, or the Orestes complex leading to the rejection compulsion in adult life, is of course facilitated if the mother has in reality been cruel or rejecting. In the writer's experience, the prognosis in any given case is better when this is a fantasied construction on the part of the patient. Here again, the transference can reveal this patterning, and transference analysis can diminish its effects. The historical development of the negative Oedipus complex, producing in latency a feeling of hostility and alienation from the mother in excess of the normal, accompanied by an excessive guiltiness and proneness to depressions, as well as the manifestation in adolescence of frank death wishes and fantasies toward the mother, must be searched for and analyzed.

THE MARTYRDOM THRILL

The influence of masochism in feeding and fixating the sense of guilt has long been recognized as one of the major obstacles to psychoanalytic effectiveness. In a sense, every neurosis is but an elaborate masochistic production, negating pleasure with pain through their fusion in the satisfactions of suffering. A systematic attack on the various roots of masochism, one of which might be termed "the martyrdom thrill," is essential if one of the chief sources of guilt hypertrophy is to be reduced and the negative therapeutic reaction overcome.

At the onset it must be recognized that, from one point of view, all education and much of living require some degree of suffering. The necessity for instinctual renunciation and denials, with their attendant pain and frustration, makes pain a part of maturation, and the inability to tolerate this pain is an important contributing factor in the immaturity which characterizes many neurotics. To learn from painful experiences requires the capacity to tolerate pain; thus this sensation is an invaluable and inevitable accompaniment of all education and development, whether in childhood or adulthood. The capacity to suffer pain without its becoming traumatic or disorganizing is the basis of all discipline, and essential to human development. An awareness of the normal and necessary "masochism" is required if its extremes are to be dealt with properly. For the capacity and willingness to suffer are essential and universal features of mental life, and it is the excessive reaction, turning denials into trauma, which constitutes disease.

To analyze the martyrdom thrill, this tendency must be reconstructed throughout the patient's life. A potent source of fixation is to be found in the latency period, when the child imagines that the more he suffers and the more pain he tolerates, the better he will be, physically, mentally and morally. The concept that suffering makes perfect, grants superiority over those who suffer less, and in some magical way guarantees success and achievement frequently develops in latency and continues into adolescence. This constitutes a major source for the patient's self-estrangement or repudiation of the pleasure principle with which the deepest ego sense is organically linked. The satisfactions of instinctual discharge become the foci of powerful revulsions, causing the patient to become what might be termed *allergic* to himself, which, in turn, creates the inner chamber of horror constituting the psyche of the guilty, masochistic patient.

One root of the thrill of martyrdom is often found in the narcissistic gratifications in suffering clustering around the story of Christ, and the patient's identification with Christ appearing in fantasies and dreams. This must be analyzed into its component grandiosity and castration roots. Excessive idealizations, with accompanying self-debasement, must be searched for and analyzed, since these, too, contribute to the intrapsychic martyrdoms of the neurotic patient. Repressed exaltations of the parents or substitute parent figures or ideals make the individual long to play the sacrificial role of the Spartan boy with the fox eating away at his stomach, a story that makes a deep impression on guilty and masochistic patients. The fantasy of the self as a tragic and heroic figure—a kind of Hercules or Hamlet, in whom, as in the Old Testament, suffering is a proof of nobility and the love of God—is frequently to be found in patients with an excessive development of masochism producing the martyrdom thrill.

THE ANALYSIS OF NARCISSISM

In his introduction of the concept of narcissism to psychoanalysis (7), Freud discussed this tendency in its psychotic, neurotic and normal functions. However, by his designating paraphrenia or schizophrenia and melancholia as narcissistic disorders, this concept became identified chiefly with the psychology of the psychoses, and the in-

fluence of this process in neurotic symptom formation and in the therapeutic difficulties of psychoanalysis has not received the attention it deserves. For narcissism, along with guilt, as the internalized instincts responsible for man's emergence from prehuman primates, constitutes the second major intrapsychic force fixating neurotic processes. A person becomes neurotic for two inter-related reasons: because he is excessively guilty about his natural, primary animalistic instincts, which excess of guilt is largely created by the second reason, his inordinate self-idealization or narcissism. The analysis of narcissism along with the analysis of guilt is therefore inevitably the second major focus of attack in any attempt to improve our power to alleviate the neurosis.

The analyst's maintenance of strict neutrality is of equal value in mobilizing the patient's narcissism as well as his guilt, as described above. For many patients, this rigid refusal to grant reassurance or affection causes a daily hurt to their narcissism, and thus mobilizes it for analysis. This often produces an urge to stop the analysis, which many times is acted out. Also, it contributes greatly to the negative transference—but such a development can be welcome, since it provides an opportunity for demonstrating to the patient his self-infatuation or vanity, which insists that all people bow down and worship his magnificence. If the analyst is seduced by the patient's charm, brilliance or personality, this cannot be analyzed, since it is acted out by the patient with the analyst, even though the latter's response is minimal.

The various inter-relationships between narcissism and the other major instinctual and structural processes described in the literature, largely in relation to the psychoses, are repressed in the neurotic. The dynamics of Schreber's delusions (8), and the mechanisms involved in melancholia (6), hold for neurotic symptom formation as well as for the frank delusion formation of the psychotic. These must be searched for in the dreams and fantasies of the patient, and their significance analyzed. In the neurotic they are usually presented in a fragmented fashion and are hidden by powerful resistances, unlike the florid and open way they are presented by the psychotic. The various pieces have to be fitted together to be analyzed properly.

In his "Stages in the Development of the Sense of Reality" (2), Ferenczi states: "The replacement of the childhood megalomania by the recognition of the power of natural forces composes the essential content of the development of the ego." In any attempt to analyze narcissism in its most palpable form as grandiosity, it should be borne in mind that this "replacement" is always a partial and frequently a tenuous or transient achievement, with the force of narcissism, under various disguises, ever seeking to reconquer the "recognition of the power of natural forces." Every night in the dream, narcissism conquers, bathing with rest and nourishment the psyche torn by natural forces. Recurrently during the day and on every holy occasion, fantasies of grandeur and omnipotence soothe the various and recurrent hurts of natural forces.

So it is with our patients (and ourselves). Grandiose fantasies and beliefs are constantly at work and, although these are beneficial and helpful up to a certain point, and when taken with a grain of salt, in the neurotic they become excessive and come to be taken in earnest (though not as substitutes for reality, as is the case with the psychotic). It is therefore essential in the alleviation of a neurosis that the narcissism and grandiosity of the patient become a specific focus of analysis. The difficulties in analyzing narcissism are many, and some analysts seem to despair of approaching this problem. Bergler (1) believes that "one of the many reasons why some analyses cannot be carried through successfully is that we are not able to induce the patient to give up the pleasure mechanism which un-

derlies the idea of the omnipotence of thoughts and which is concerned with the gratifications of his infantile delusions of grandeur."

The factors and forces intensifying narcissism are of course legion. Parental idolizing of the child, projecting onto him future omniscience and omnipotence (in the case of a boy) and future perfect beauty and charm (in the case of a girl) should be searched out as possible factors in the early childhood relations of the patient with his parents. Magic beliefs, fairy stories, romantic and grandiose fantasies in latency and adolescence should be sought for, since these, too, contribute to excessive narcissism in adult life and, when not uncovered and analyzed, continue to be secret sources of narcissistic excess in the neurotic patient. Religious beliefs, practices and identifications are a major area wherein narcissistic fixations can hide in a seeming sanctuary. These, too, must be rigorously analyzed if relief is to be achieved. Also, the manifest content of dreams, as well as the latent grandiose wish, may reveal and point up excesses in the development of this tendency.

Another source of excessive narcissism to which attention must be paid is the making of fantasies about important persons and then the demanding of their transformation to the wishes therein expressed. The substitution of psychic for external reality, described by Freud (9), is a major factor in the infantile fixations of the neurotic, and in many patients continues into and throughout adult life. The patient's fantasies about important persons—parents or mate—become a means for building up narcissistic pleasures; then the object's inability to transform himself into a fantasy causes powerful aggressive outbursts, sparked by a defeated grandiosity which severely disturbs interpersonal relationships. These fantasies provide the patient with abundant traumatic experience administered in retaliation for his aggressive narcissism. The intolerance of the narcissistic patient for the imperfections and realities of his object relationships must be analyzed to its origins in his swollen vanity, which demands super-men or super-women as worthy love objects.

The general tendency to romanticize the self and others, to pretend and then half-believe that life should be as gay, frivolous, exciting and glamorous as in novels, movies and plays, is a frequent manifestation of narcissistic excess. The various roots of this puerile striving for idealized fantasy objects in others, including the aggression and defiance in reversing the all-too-mortal characteristics of the parents into an exalted image which leaves their real selves profoundly deficient, must be exposed if the individual is to mature. For though the origins of a neurosis go back to early childhood, the tendencies and forces that charge neurotic developments can and do persist throughout adult life. This is the reason so many patients must return to analysis after a fairly successful initial analysis. For unless their guilt and narcissism, along with the early libido disturbances, are properly analyzed, the major forces creating neurotic dysfunction revive old and create new disturbances.

THE VENGEANCE COMPULSION

A pathologic formation arising from an excess of narcissism, seen in many patients, is what might be termed "the vengeance compulsion." This takes various forms but, in essence, is a desire to retaliate with aggression against those who have wounded a hypertonic narcissism. Another root of this drive, which frequently takes on paranoid overtones, is a massive negation of passive feminine wishes and desires for castration, reversed to the desire to aggress against and injure the offending object (as revealed by Freud in the Schreber case). Life with another person, whether parent, sibling or spouse, is inevitably accompanied by "narcissistic wounds," and in those patients with excessive grandiosity the desire

to e[x]propriate the "To me belongeth vengean[ce]" (Deuteronomy 32:35) of God become powerful and compelling, so that interpersonal relationships are poisoned by the desire for retaliation.

To a large extent, the fixation to the infantile patterns and the inability to mature that are characteristic of the neurotic are fired by a desire for vengeance. The fixation throughout life onto the image of the father as a rival as derived from the Oedipus complex is largely connected with the desire to avenge the fantasied defeat at his hands. Because the narcissism of the patient cries out for vengeance for real or fantasied wrongs, outrages and hurts which negated his infantile strivings, past experiences remain charged with intrapsychic tension. It is therefore necessary to analyze this tendency in the individual if he is to become able to "suffer the slings and arrows of outrageous fortune," past, present and future. The narcissistic, libidinal and aggressive roots of the vengeance compulsion must be explored in detail if the patient is to be relieved of this crippling and disabling compulsion. For the desire for vengeance can only bring about further hurts and wounds, thus creating a vicious circle of increasing aggression and wounded narcissism.

Closely allied to the vengeance compulsion is the general character trait of spitefulness, which prevents the individual from forgiving or forgetting wounds to his vanity. Oral libidinal factors contribute significantly to this pattern. Spite is frequently turned against the self, producing the self-crippling reaction of sullenness, especially when the objects of vengeance are the parents with whom the patient identifies. This frequently results in a generalized negativism and a need to fail, a neurotic way of punishing the hated, narcissism-wounding parents. Pathologic spitefulness, when directed toward such an adult object as the marital partner, keeps the relationship in a state of chronic tension or cold war, and prevents the development of a fuller and more nearly complete love relationship. This mechanism constitutes a major factor in the dynamics of marital conflict, and must be thoroughly analyzed to achieve the essential, improved intrapersonal functioning necessary for the resolution of a psychoneurosis.

Thus through a sharper focusing of analytic attention on the excesses of guilt and narcissism responsible for transforming normal defenses into pathologic states, an increase in therapeutic efficacy can be achieved. In the author's experience, a patient with a severe personality neurosis which had not yielded to id or ego analysis, and one case of homosexuality, showed marked improvement through this approach. Worden (17) reports a similar increase in therapeutic effectiveness by the sharper focusing on guilt. Through the reconstruction of the history of these drives, which constitute the counter-instincts as they manifest themselves in early childhood, latency, adolescence and adult life, more patients can be relieved of a broad area of their neurotic dysfunction.

As the major, recently developed instinctual forces maintaining the mind of man (16), the counter-instincts, or guilt and narcissism, are more responsible for neurotic disorders than are the primary instincts of eroticism and aggression. Only by analyzing the patient's guilt and narcissism along with the vicissitudes of the libido transformations can the neurosis be subjected to a complete and total attack. As the entire psychic apparatus is involved in a neurosis, it can be effectively dealt with only by an approach which concentrates on the whole, as contrasted with the fractional approach, which focuses merely on the depths or the surface. Such a technique approximates the holistic goal of psychoanalysis, and from the above theoretical considerations and from clinical experience offers a means to improved psychoanalytic therapeutics.

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BEHAVIORAL EFFECTS OF INTERRUPTING AND RESUMING TRANQUILIZING MEDICATION AMONG SCHIZOPHRENICS

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INTRODUCTION

The effectiveness of tranquilizing drugs in reducing or eliminating many of the symptoms of some schizophrenic patients has been well established by numerous clinical and research reports, among them the VA Cooperative Studies in Chemotherapy. Although less attention has been given to studying the effects of interrupting and resuming such medication, a number of recent articles bear on these issues. Rothstein (9) found no increase in certain selected symptoms within three months of discontinuation. His experimental group was small, and there were no control subjects. Several other investigators (1–8, 10) have found strong evidence of behavioral deterioration and increased symptomatology following withdrawal of tranquilizers. Relapse has been noted in individual patients as early as four days after withdrawal, but significant group changes usually were not statistically demonstrable in the first few weeks or months (2–4, 6). Some investigators (3, 4, 7) noted recovery to the pre-withdrawal level following resumption of medication. Some (2, 3, 6) noted that conventional psychologic tests were not sensitive indicators of behavioral change associated with medication, particularly when compared with behavior rating scales.

The present study was designed primarily to determine the value of continuing clinically tranquilized patients on maintenance doses of phenothiazines. Since the conception and execution of this study pre-date the appearance in print of many of the more crucial of the above cited articles, our pre-experimental belief (based on non-systematic clinical observations) was that expensive, potentially harmful medication schedules were being perpetuated in our hospital without good evidence of their necessity. We fully expected to demonstrate that tranquilizers are not a crucial part of the treatment of well institutionalized schizophrenics. We were secondarily interested in whether any observed deterioration would occur relatively early (within two months) or relatively late (within four months), and whether any observed deterioration would be reversed by simple resumption of the initial type and dosage of medication.

PROCEDURES

Sixty fully privileged, open-ward male veteran schizophrenic patients, who were judged by the psychiatric staff to be clinically tranquilized and to be making a satisfactory hospital adjustment on phenothiazine medication, were selected for inclusion in the study. Initial daily drug dosages ranged from 15 to 150 mg. of prochlorperazine, 12 to 24 mg. of perphenazine, 50 to 800 mg. of chlorpromazine, 200 to 400 mg. of promazine, and 6 mg. of trifluoperazine. Age range was restricted to 20 to 40 years. Length of current hospitalization ranged from three months to 129 months, with a mean of 45 months. Despite the presence of a few "short-timers" in terms of current admission, this remains a "chronic" group, since even the short-timers had a history of previous admissions.

Subjects were randomly assigned to two main groups, 30 controls and 30 experimentals. Control *Ss* (the DD group) remained on the initial type and dose of tranquilizing medication throughout the study, a period of 16 weeks. Experimental *Ss* were

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further randomly subdivided into two groups of 15 each. In one subgroup (the PD group), a placebo (thiamine chloride) was substituted for the phenothiazine for the first eight weeks. In the other experimental subgroup (the PP group), a placebo was substituted for the phenothiazine for the full 16 weeks. The placebo was physically different from the phenothiazine and thus identifiable to patients and personnel as a *change* in medication. Patients were told by nursing personnel that their doctor had prescribed a new medication. Nursing personnel were told that "C.A.T." medication was being substituted for some patients in conjunction with a research study. It was noted, however, that nursing personnel were soon correctly referring to C.A.T. as a placebo. Each patient was rated at the beginning of the study, at the end of eight weeks, and at the end of 16 weeks. The rating instruments used were the Patient Adjustment Report, a locally designed behavior rating scale for measuring the patient's adjustment in the ordinary routines and personal interactions on an open ward, and a modified form of the Taylor Manifest Anxiety Scale, a 50-item true-or-false self-rating scale for measuring feelings of personal discomfort. Other available patient rating scales were not employed because in our judgment they contain too many items which discriminate between acutely ill or chronically ill patients, or between closed-ward and open-ward patients, but do not discriminate among chronic, well institutionalized, open-ward patients, the group we were studying. There are thus no items in the PAR dealing with assaultiveness, destructiveness, soiling, self-harm, mutism, or other really gross maladjustment indicators. Typical items are: Does he mix with the other patients? Does he create problems for the ward personnel? Does he come to sick call with minor or imaginary complaints? Is he eager to leave the hospital? Is he distant? Is he nervous? Is he likable? Only those items were retained which met the unanimous judgment of four psychologists and one psychiatrist as relevant adjustment discriminators among our described patient group. Ratings were completed independently by both the nurse and the aide on each ward at each of the three rating periods. They were instructed in the uses and misuses of rating scales, and were given some preliminary training in the use of the scale with patients who were well known to the investigators but who were not to be part of the study. Their printed instructions (here condensed) were to compare each patient on each of 67 items with the other patients on the same ward, and to assign separate item scores of 1 to 5. A score of 1 means much less than the average patient, 2 means less than the average, 3 means average, 4 means more than average, and 5 means much more than average. A high score on 34 of the items reflects adjustment (*e.g.*, Does he mix with the other patients?). A high score on 27 of the items reflects maladjustment (*e.g.*, Is he distant?). Six items were eliminated from total scores after the ratings were completed when it became apparent that a high score might not be unambiguous (*e.g.*, Does he sleep well? answered with a score of 5 might mean that he sleeps the way normal people do, or that he sleeps all the time). A given patient's adjustment score was the simple algebraic total of his 34 adjustment item scores *minus* his 27 maladjustment item scores. The higher his score in the plus direction, the better his relative adjustment; the higher his score in the minus direction, the worse his relative adjustment. Comparison of the initial nurse and aide ratings for each patient showed a Pearson's r of .75, considered a satisfactory level of reliability for a behavior rating instrument.

The Taylor Manifest Anxiety Scale modification consisted essentially in giving the patient a temporal set in reporting his symptoms by adding the phrase "in the last few weeks" to each item. These self-ratings were administered by a psychologist.

RESULTS

The study began with 30 DD subjects and 30 each of PD and PP. During the course of the study, seven patients were lost for administrative reasons unrelated to clinical condition. The final statistical analysis thus includes only 53 patients (25 DD, 14 PD, 14 PP).

Self-ratings may be rapidly dismissed. No statistically reliable group difference in self-report of discomfort and anxiety symptoms was found. Hospitalized schizophrenics do not appear to be reliable informants regarding their own condition. Certainly our clinical experience has led us to expect routine denial of new symptoms, particularly in an open building where discharge from the hospital and other privileges might be delayed or denied on this basis.

Descriptively, profound behavioral changes were associated with withdrawal of medication, including acute anxiety, insomnia, pacing, delusional activity, hallucinations, psychosomatic complaints, withdrawal, mutism, and even wetting and soiling. In some cases these behavioral changes represented increases in already clinically observable symptoms; in others they represented a re-emergence of earlier symptoms not clinically manifest at the beginning of the study.

Statistically, behavioral changes were handled in the following manner: Nurse and aide ratings were combined for each patient. The resulting score distribution ranged from −79 to +232, with a mean of 47, a standard deviation of 59, and a standard error of measurement of 30. A patient was considered to have *significantly improved* in his adjustment if his rating score had increased by at least one standard error of measurement since his initial evaluation, *or* if he was released from the hospital in that period. He was considered to have *significantly deteriorated* if his rating score had dropped by one standard error of measurement since his initial evaluation, *or* if his behavior had necessitated emergency resumption of drugs and/or transfer to a closed ward before the next scheduled rating period. All other patients were considered to be essentially unchanged.

The scoring system here represents what to us is a reasonable compromise with the realities of performing research in a service-oriented setting. Ward psychiatrists wished to retain the right to make treatment decisions *(e.g.*, discharge, drug resumption) about their patients when necessary, rather than at some prescribed eight- or 16-week period. Thus, if we chose to retain in the study only those patients who were not discharged or who did not require emergency resumption of drugs or transfer to a closed ward, we would be dealing strictly with test scores as evidences of change, but eliminating exactly those patients who showed the most change during the course of the study. If we chose to rate each patient whenever some treatment change was decided upon, we would be comparing changes over varying time bases—we would be comparing amount of change in one patient, for example, over five days with the amount of change in most other patients over 56 days. Thus, it was decided on a judgmental basis to obtain either of two indices of change for each patient to use in our final statistical analysis. Whenever possible, this index would be based on rated change over an eight-week period. Otherwise, it would be based on a crucial treatment decision regarding the patient. The final data are thus non-parametric, with *plus* representing *either* an increment of one standard error of measurement *or* release from the hospital, with *minus* representing *either* a decrement of one standard error of measurement *or* emergency resumption of drugs, and with *zero* representing a change of less than one standard error of measurement in either direction. With 20/20 hindsight, we might choose on another occasion to rate each patient at the time of any crucial treatment decision and be able then to deal with test

scores alone in evaluating the influence of drugs. Despite any choice in statistical handling, the results themselves, viewed non-statistically, appear to be clear, real and reproducible.

At the end of eight weeks, ten of the 25 drug patients showed significant improvement in rated behavior, as contrasted with improvement of only four of 28 among the combined placebo groups (both PD and PP). In the same period, 15 of 28 placebo patients showed significant deterioration, as contrasted with deterioration of only six of 25 among the drug group. No significant change occurred in nine of the drug group and in nine of the placebo group within this eight-week period.

At the end of 16 weeks, 14 of the 25 drug patients were significantly improved in rated behavior, as contrasted with two of 14 in the PD group and two of 14 in the PP group. Significant deterioration over the 16-week period occurred in only three of 25 drug patients, in five of 14 PD patients, and in eight of 14 PP patients. With eight of the DD group, seven of the PD group and four of the PP group, no significant change between beginning and end of the study was measurable.

During the 16-week period of the study, nine of the 53 patients showed sufficient improvement or stability of improvement to be released from the hospital (seven DD, one PD, one PP). In the same period 12 of the 28 placebo patients became so clinically disturbed or regressed as to require emergency resumption of drugs and, in some cases, transfer to a closed ward (four PD, eight PP). One DD patient also required transfer to a closed ward because of behavioral deterioration. In other words, of 22 treatment decisions based on clinical condition, 19 were in a direction consistent with improvement while on drugs and deterioration when drugs were discontinued.

Separate chi-square analyses of the observed changes by groups were calculated for the eight-week and 16-week periods. At the end of eight weeks the differences among the groups with respect to relative improvement, deterioration or stability were significant. ($X^2 = 6.36$, df 2; probability of a chance difference is between two and five per cent.) By the end of 16 weeks, the differences were more pronounced and more statistically reliable. ($X^2 = 14.09$, df 4; probability of a chance difference is less than one per cent.) The DD group, as a group, was greatly improved, the PD group had shown initial deterioration followed by some improvement after resumption of drug therapy, and the PP group had shown consistent and marked deterioration.

TABLE 1
After Eight Weeks

	Improved	Deteriorated	Unchanged
Drug	10	6	9
Placebo (PP and PD combined)	4	15	9

TABLE 2
After 16 Weeks

	Improved	Deteriorated	Unchanged
DD	14	3	8
PD	2	5	7
PP	2	8	4

DISCUSSION

These results confirm the findings of other investigators regarding the importance of tranquilizing medication in maintaining the behavioral stability of chronic schizophrenic patients even after a long period of clinical equilibrium. They further confirm that, in many cases, termination of medication will probably eventuate in re-emergence or exacerbation of the acute symptoms of the illness, but that this clinical deterioration can again be reversed by resumption of medication. This study provides no readily discernible basis for predicting which patients will deteriorate and which will remain relatively unchanged when medication is in ter-

rupt[illegible]. Significant deterioration was *not* relat[illegible] to initial adjustment level, type of drug [illegible]rug dosage, age, or length of current hosp[illegible]alization. However, since six of the 14 PP [illegible]tients were either improved or unchan[illegible]d even after four months without medi[illegible]tion, some effort to eliminate this unneces[illegible]ary and expensive treatment, possibly on a [illegible]rial-and-error basis in the hospital, seem[illegible] reasonable and justifiable.

On[illegible] unevaluated factor is the amount by whic[illegible] these results were influenced by know[illegible]edge on the part of personnel of the nature and timing of the drug changes, and knowledge on the part of the patient that some drug change had been instituted, since placebos were physically distinguishable from drug tablets. The speed with which deteriorative changes occurred (one patient required emergency resumption of medicine within five days) is comparable to the findings of other investigators who did not utilize double-blind procedures (1, 5, 7, 8, 10), whereas investigators who did employ double-blind procedures (2–4, 6) found similar changes at a later period following withdrawal. It thus appears that knowledge on the part of personnel and patient regarding medicinal change or withdrawal generates mutual anxiety which speeds up, but does not cause, the deteriorative process. Since in the ordinary clinical situation both patient and personnel are aware of any and all medicinal changes, the present study conforms more to the results to be anticipated in our usual methods of interrupting and resuming drugs. It does not, however, allow us to evaluate whether the reported behavioral changes are real changes in the patient, or some combination of real changes in him and perceived changes dictated by the bias of the observer regarding the necessity for and the efficacy of tranquilizing drugs. Several aides and nurses expressed concern over our "depriving" patients of "necessary treatment" for research purposes.

Finally, we conclude from this and other studies that the essential effects of tranquilizers are sedative rather than curative, but that the period of sedation allows for more direct assaults on the basic disorders of attitude, habit and perception which characterize schizophrenia.

SUMMARY

Sixty schizophrenic patients making a satisfactory open-ward adjustment on phenothiazines were randomly divided into three groups: one group (DD) remained on original drugs throughout the study, one (PD) was switched to placebos for eight weeks and back to original drugs for eight weeks, and one (PP) was switched to placebos for 16 weeks. Ward ratings by the nurse and aide (based on a 67-item scale of adjustment to the ordinary routines and personal interactions of the hospital) and self-ratings (based on a modified Taylor Anxiety Scale) were obtained initially, eight weeks later, and 16 weeks later. No reliable group differences in self-ratings occurred. However, substantial and statistically reliable differences in ward ratings were found. The DD group improved (14 improved, three deteriorated, eight remained unchanged); the PP group deteriorated (two improved, eight deteriorated, four remained unchanged), and the PD group showed initial deterioration, followed by some improvement on resumption of drugs (two improved, five deteriorated, seven remained unchanged). A large proportion of the placebo patients (12 of 28) deteriorated to a point requiring emergency resumption of medication and/or transfer to closed wards. We conclude that tranquilizing medication is highly important in maintaining the behavioral stability of many chronic schizophrenics, and that such patients are poor informants regarding their own condition.

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PSYCHODYNAMICS OF PSYCHOPHARMACOLOGY

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Psychiatry is undergoing a pharmacologic revolution that cannot be ignored; there are many positive results, and many patients who have benefited from pharmacologic discoveries and their application. But we lack objective analyses of the psychotherapeutic process as observed in patients under pharmacologic treatment. At best we have merely ingenious theories, rather than secure scientific explanations.

This paper will attempt to present some dynamic problems which arise during drug therapy. For example, evidence is accumulating that results are sometimes obtained that cannot be explained solely as effects of the drug. These and other extrapharmacologic phenomena will be considered, and possible dynamic explanations will be offered.

Recent reports on the beneficial effects of drugs with psychotropic action also mention the possibilities of the so-called "placebo effect." This effect must of course be carefully weighted when a new drug is being evaluated. That some patients will respond favorably to an inert substance is so well known to medicine that the word *placebo* has come to mean a substance given to a patient to please rather than to treat him. The term is used today to designate an organically ineffective preparation that can nevertheless produce reactions—subjective responses to original sensations (4, 5).

Of the current concept of beneficial results unrelated to the drug itself, Gliedman and his co-workers (11) write that a placebo may be considered an "activator, reinforcer and potentiator of many of the health-promoting factors intrinsic to the psychotherapeutic process," or a catalyzer of "the patient's recovery potential in relationship to his particular therapist under certain culturally important and valued conditions." Thus we see that the "placebo" concept goes far beyond the drug itself; it is clear that any drug has great placebo possibilities. Beecher (4) reported that, in any pharmacologic study, there is 35.2 ± 2.2 per cent of placebo effect, and that therefore any drug yielding positive results at or near such a percentage will be of no more value than an inert substance.

The placebo effect can easily be increased by the attitude of the physician toward the drug he prescribes. Feldman (9) has shown how a particular drug in the hands of a physician biased in its favor will prove more effective than the same drug in the hands of a colleague less certain of its possibilities. Haefner *et al.* (12), continuing Feldman's research but with more statistical elaboration, found that their results "were decidedly and significantly in the direction appropriate to his conclusion."

The setting of a child guidance clinic offers a broad constellation of "prescribing" attitudes. Conceived of as a social institution, a community agency with Freudian and neo-Freudian ideologies alien to biologic and organic psychiatry, our clinic has proved to be a stimulating observation point for interpersonal reactions (17) to the use of pharmacologic agents in the treatment of some of our young patients. Social workers, psychologists, residents in child psychiatry—each group brought its own biases toward drug therapy, biases modified when, under our strong convictions, the children's behavior began to show improvement (16, 18).

Parental attitudes toward the use of drugs in therapy also varied markedly. One father said, "Fine! Finally this kid is going

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to get something!" Another adopted the classic submissive attitude toward the physician. Another feared "drugging" the child. The complexity of expectations, biases and inner conflicts, and the parent's attitude toward his child, also seemed to modify drug results. Where the parent felt a genuine desire for improvement in his child, we saw beneficial effects (17). Where the parent's attitude was a negative one (perhaps stemming from the belief that the child's "medical" problems were the province of the family doctor or the pediatrician), we could not of course prescribe drugs.

We also saw instances of attitudes producing a negative influence in psychopharmacology, a real reversal of the "placebo" situation. This we called the "anti-drug" effect (17). Just as the therapeutic action of an effective drug may be enhanced by dynamic interpersonal events —or an inert substance produce beneficial results—so may the action of an otherwise effective drug be hindered. When research investigations involve the use of inert substances as controls, the results usually tend to verify the efficacy of the drug under study, but such studies sometimes yield surprising results—as when a patient gets worse, or has a toxic reaction not to the drug under study but to the placebo used as control. Wolf and Pinsky (28) described such toxic reactions as epigastric pain, palpitations, diffuse rash and nausea; Beecher (4) reported dry mouth and headaches; Modell (22) observed other toxic symptoms, and spoke of "positive" and "negative" placebo effects.

Any careful, comprehensive study must take into account a variety of possible factors that can influence outcome either positively or negatively: family, environment, cultural background, motivations, communication in the relationship between physician and patient, physical setting of the prescribing of medication (whether hospital, child guidance clinic, private office or other)—and, of course, the great unknown: the drug itself.

THE SCIENTIFIC APPROACH AND ITS DIFFICULTIES

To lessen some of the above problems, the statistical method of planning research and evaluating results has been repeatedly refined. With so many variables involved, it would seem that any drug study must resort to factor analytic methods to put meaningful constructions on the data. For example, where a drug has proved effective in the experimental animal but shows no more than a placebo effect in human clinical trial, factor analysis would be necessary to show the extent and kind of "anti-drug" effect present.

The double-blind technique, so cherished by some investigators, has serious deficiencies (27); sometimes it may conceal poorly designed and analyzed experiments, as Modell (22) has pointed out.

We believe a disequilibrium exists between what we have learned about psychotropic drugs by scientific methods, and the results obtained from their use. In the field of neurobiochemistry we have advanced little beyond theory and speculation; Masserman writes concerning the action of the new drugs that "a half decade of intensive experimentation has indicated, in briefest statement, that most phenothiazine derivatives and related 'ataractics' are on the whole inferior to the bromides, barbiturates, and alcohol in ameliorating experimental neuroses" (21).

The array of difficulties focuses our attention on possible explanations of the psychopharmacologic phenomenon, which certainly exists, and cannot be dismissed as unimportant. We feel that the introduction of dynamic concepts may help, if not to clarify or simplify the problem, at least to make it better understood.

DYNAMIC PROBLEMS

First let us consider the problems of the therapist, whose attitude will influence the results of treatment, and whose "personality is the most important agent of the therapeutic process" (6). Not by chance is he bound by his therapeutic philosphy to a specific type of doctor-patient relationship. MacIver and Redlich (20) described from the sociologic point of view the differences in personality traits between psychiatrists with analytic and psychologic orientation and those with directive and organic orientation. Klerman and his co-authors (15) described the psychosocial characteristics of psychiatrists as determined by scores on measures of authoritarianism and related values, and stated that they "have evidence of two treatment-personality patterns: first, what we shall call the 'low' pattern, psychiatrists with very low scores on drug usage and authoritarianism; and, second, the 'middle' pattern, psychiatrists with moderate scores on both sets of measures." Knowledge of the dynamic factors determining the type of psychiatrist who adheres rigidly to a particular frame of reference will contribute to our understanding of psychopharmacologic dynamics. Speculation must yield to scientific investigation—for example, in the field of possible neurobiochemical actions, many of which are undemonstrable and even contradictory.

The phenomenon of countertransference seems to play an important role in the therapeutic process. In psychotherapy it is of paramount significance (6). Its importance in medical practice was stressed by Lewin (19), and in physical methods of treatment in psychiatry by Hill (13) and by Abse and Ewing (1), who stated that "it is important to realize that there are crucial psychodynamic events involved in the organic therapy of a functional psychosis."

Little study has been made of the countertransference phenomenon, a regrettable fact which Racker (23) attributes to the analyst's inability or refusal to face up to his own unresolved conflicts. This raises the question: Is the poverty of research in the psychodynamics of psychopharmacology due perhaps to countertransference conflicts not only toward the patient but also toward the drug itself, as an object symbol? And the further question: Could this same concept of countertransference conflicts explain the poor results so often obtained by the dynamically oriented psychiatrist, who seldom prescribes drugs and who, when he does, may well introduce a strong "anti-drug" effect by his own attitude?

This anti-drug effect suggests what Freud (10) termed "negative therapeutic reaction," and Horney (14) considered to be an expression of the patient's feeling of rivalry toward his analyst, and his basic hostility. Racker (23) suggested that certain attitudes of the analyst might generate in the patient fears that would be the basis for such negative reactions.

The elemental problem, however, is a strong resistance to treatment, a powerful urge *not* to be cured, well illustrated in the following brief case history.

Case 1. A 34-year-old married female with a serious depression and strong hypochondriacal symptoms responded with evidence of intolerance to every pharmaceutical product. One 10-mg. tablet of imipramine hydrochloride precipitated a crisis of vertigo, followed by nausea and vomiting. Her physician administered atropinics, which produced severe constipation, dry mouth, a choking sensation and fainting. Pentylenetetrazol was given by hypodermic injection, but the reaction to this was tachycardia and anxiety.

The patient had had many such experiences in her search for help for her "weakness" and her "fear of becoming crazy." We witnessed her reactions during the first stages of treatment. In her severely depressed state she evidenced

strong negative therapeutic reactions—very marked side-effects—to all of the known antidepressants. An injection of 2 cc. of a normal solution of sodium chloride immediately produced dry mouth, mydriasis and vertigo. That night the patient began to vomit and to complain of aches and pains and, the next morning, of a severe headache. The following day the same symptoms were produced with only 1 cc., and later with orally administered placebos.

The patient finally obtained some relief following psychotherapy, which offered interpretations of her resistance and her repressed hostility, and stressed the significance of the intake of any medication as equivalent to an attack from a destructive object previously introjected. The patient then began to consider the possibility of abandoning the masochism of "medicines."

Such patients exhibit not only resistance to treatment but also, at times, the whole gamut of a self-destructive fight—one which can culminate in death. There have been reports of fatal cases during drug therapy within acceptable dosage (26). Evidence of this type of problem is often seen during psychotherapy: the patient numb, lethargic, possibly because of a symbolic introjection of a destructive object (which could, of course, produce or increase a negative therapeutic reaction (7, 8)).

When autodestructive components are present, the intense "tranquilization" that many psychiatrists try to obtain with ataractics can be dangerous. Furthermore, such tranquilization (a biologically verifiable regression) permits the structuring of primary fantasies and the satisfaction of frustrated oral needs, thus bringing the whole problem of orality into play, as illustrated by the following history:

Case 2. A 32-year-old married woman had begun at the age of two a conflictual relationship with her mother which, at the age of nine, during her mother's pregnancy, forced her to take pills (as her mother did) to correct constipation when she was in fact not constipated. She later stated that she took the pills in such number that she cannot understand why they did not harm her.

When the patient was 16 the difficulty she had had for several years with sleeping turned into true insomnia. Also, she began a steady gain in weight which she attempted to correct with amphetamine. There followed a psychotic episode with hallucinations, and she was hospitalized. (She was in another country at the time, and treatment apparently consisted of electroshock therapy and some sort of milieu therapy.)

During this period the patient was seeing her father but not her mother. After a few months she returned to her own country, and four years later married a physician. At the same time she and her mother were reconciled. Shortly after the reconciliation the mother became ill, was operated upon and died, whereupon the daughter's symptoms returned. She was treated several times for depression, treatment being the known biologic procedures, and new drugs were used as they became available.

By the time we saw the patient her symptoms consisted of episodes of anxiety, a lack of interest and of satisfaction, insomnia, and worry over her increasing weight. If she took one of the amphetamines she could not sleep; if she took barbiturates she became habituated. Any other drugs brought side reactions—for example, a well known antidepressant prescribed during one of her crises lifted her mood somewhat but caused her to gain eight pounds, which increased her anxiety.

Shortly after this the patient went into a severe, agitated depression, and her husband referred her to us for barbiturate addiction and an attempt at suicide. We were unable to reduce the insomnia, but

her other symptoms improved somewhat after electroconvulsive therapy, as they had when she received similar treatment at the age of 16.

The response of this patient to the administration of drugs was interesting. When an attempt was made to substitute hypodermic injections for oral medication, giving a higher dose, which theoretically should have been more effective, she went into an anxiety crisis that led her to a compulsive oral intake of a dose three to four times greater than the one she had been given.

Psychotherapy uncovered a fear of sleep, which the patient equated with death; through death she identified herself with her mother. In "twilight sleep" she was filled with sadistic fantasies. She also had intense cannibalistic-destructive fantasies in which she killed her wicked mother and then was unable to undo the damage.

Psychopharmacologic agents seemingly mobilized all of the destructive tendencies of this patient. They always became "bad" objects (the "bad" mother), which the patient introjected. Also, they were always given her by a physician, who, to her, was a punishing figure (the electroconvulsive therapy, hospitalization, and so on) and who was at the service of her destructive tendencies.

The regression observed in psychotherapy, especially in analytic therapy, when the patient becomes drowsy, numb or lethargic, is a means of resistance or an expression of a negative therapeutic reaction which, as has been mentioned, can be reproduced psychopharmacologically. Sometimes this regression implies a desire for an even deeper, a fetal regression, where prenatal, incorporative processes take place, with their consequent identifications (24, 25). Heavy doses of phenothiazine can induce a similar disconnection with the outer world, together with hallucinations, fantasies, and dreams of a two-dimensional type such as those described in the supposed fetal psychism (25).

Case 3. A ten-year-old psychotic boy had had a very traumatic family history, including the loss of both parents by suicide. Since the age of four he had been reared, with his little sister, by an elderly grandmother.

We treated this patient in a residential treatment center with chlorpromazine, methylphenidate and play therapy. As long as the dosage of the phenothiazine increased, the regressive phenomenon induced by the drug was observable. The patient at one time told me he saw me as if I were "on a TV screen." When I commented on this expression to the personnel at the center, they said that he reported this type of image rather frequently, and had suddenly begun saying that the garden, the dining-room and the street reminded him of "pictures mother used to have." At this time the hyperactivity he had displayed during earlier treatment abated to a point where he would sit quietly in a corner, sometimes in a fetal position.

When we reduced pharmacologic therapy but continued with play therapy, the patient showed surprise that, as he began to improve, he was able to see me as "a real man, a man of flesh and blood." He began to explore the house and garden, to relate to his teacher, to make some academic progress, and to take part in real games.

The phenomenon of fetal regression induced by the tranquilizing drugs deserves careful consideration. The drug, an external object, can be internalized. This is a concrete experience. What the drug can actually achieve for a particular patient will depend upon that patient's life history, and the circumstances and environment in which he is treated. Will it yield only a negative therapeutic reaction? Will it satisfy oral dependency in a negative or a positive way? Will it represent a "bad" external

object to be internalized? Will it induce regression as far as the fetal stage, and can it facilitate restoration later? The drug can either gratify or destroy, and therefore can be related to some as yet unexplained placebo or anti-drug effects.

The drug as an object-symbol may be equated with words, which are also used as object-symbols, especially in psychoanalysis (2, 3). If the patient can make a *projective identification* with the therapist's outside world on the basis of a pre-established expectation that the therapist and his acts are good, the drug can provide the patient with a concrete medium with which to make an *introjective identification* with the therapist. The alternative phenomenon—destruction or control, followed by restoration and creation, which is produced during analytic treatment by the medium of words—can also be produced by the psychopharmacologic interaction.

One characteristic of drug therapy which distinguishes it from other somatic therapies is the close interpersonal contact between patient and physician that it demands. The contact is intense and prolonged, and is gratifying rather than aggressive. Because of the concreteness of the satisfaction felt in receiving medication from the physician, the patient can make the drug an object that replaces the analyst of the psychoanalytic relationship, and thus introject the therapist. In this way the processes of destroying or repairing are mobilized by this symbol-drug. This postulate might help to explain placebo or anti-drug effects, and the curative power of certain therapies which actually do no more than permit a patient's latent or unconscious potential to evolve.

There is of course the negative side to be considered—the occasional distressing results (sometimes even death), despite great care in determining dosage and watching for side-effects. Expecting pharmacology alone to effect a cure is, I submit, tantamount to hoping that the patient will get well no matter what is done to him—an attitude which of course limits the possible effectiveness of the drug. On the other hand, its effectiveness *can* be increased when personality dynamics are properly taken into consideration.

At present, drug therapy is often something of a gamble, an empirical endeavor that might stimulate a restoring process, might conceal symptoms, precipitate the negative, unbind the destructive, or perpetuate the illness.

We want to stress again the need to know what goes on within the individual under pharmacotherapy. Research must clarify whether the dynamic processes outlined above, or perhaps others, participate in the therapeutic phenomenon. Research must seek a scientific explanation for the psychopharmacologic enigma of good, bad or paradoxic results from drug therapy.

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THE EFFICACY OF ELECTROCONVULSIVE THERAPY, IPRONIAZID AND PLACEBO IN THE TREATMENT OF YOUNG DEPRESSED WOMEN[1]

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THE PROBLEM

The primary purpose of the present investigation was to provide an evaluation of the relative efficacy of three current methods for treating severe depressions: electroconvulsive therapy, iproniazid (the monoamine oxidase inhibitor), and a placebo.

Since all of these promising methods of treatment for depression are attractive from the standpoint of their claims, and since they also involve some handicaps and possible risks, it is important that their relative efficacy be determined in as exact and comprehensive a manner as possible (7).

As a clinical entity, depressions comprise a familiar, if not commonplace, syndrome of symptomatic manifestations. Although most of these symptomatic manifestations may be found in almost all depressions, the degree to which they characterize a patient can vary appreciably from case to case. Accordingly, despite their general similarity, depressions may differ from each other in one or more symptomatic respects. Virtually all depressions involve marked subjectively experienced dysphoria with feelings of hopelessness and self-condemnation, and most depressions are characterized by a quality of motivational apathy notable in its lack of resistance to external pressure, and weakness of any externally directed hostility. With this apathy and the lack of initiative which it implies, an apparent slowing of cognitive and perceptual processes comprises a third symptomatic feature. As a fourth symptomatic feature, there is usually evidence of motoric retardation, characterized by a listlessness, if not an actual reluctance to act. As additional symptomatic features of depression we may find indifference to food, insomnia, and somatic complaints, often in the form of fatigue, chest pain or muscular aches. Although not an invariable part of the depressive syndrome, anxiety is usually apparent and may often comprise a symptomatic constellation dramatically conspicuous in its own right.

Since there are several clinically distinguishable aspects of a depression, it is quite possible that one treatment might be most efficacious in one respect and another treatment most efficacious in some other respect. For this reason the investigation included criteria representative of the several major aspects of a depressive disorder, as well as a global criterion representative of depression as a gross clinical entity.

[1] This report, based on a comprehensive study of the treatment of depression, was supported by U. S. Public Health Grant MY2525 from the Psychopharmacology Service Center of the National Institutes of Health.

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In the present study we have used the depression cluster score from the Wittenborn Psychiatric Rating Scales as a means of providing a composite evaluation of depression as a clinical entity. This rating scale cluster score, based on a summary of symptom ratings for depressive manifestations, comprises our global clinical criterion. To provide some objective confirmation of the implications of the clinical ratings, and to amplify and elaborate the picture of clinical change to include the major features of a depressive disorder, we have used various additional tests, measures and ratings. Accordingly, to develop elaborative and confirming criteria of the broad clinical constellation which depressions comprise, we have sought to gauge the patient's subjective state, the strength and direction of his aggressive motivation, the speed and quality of his cognitive and perceptual processes, and his symptomatic manifestations of anxiety, motoric slowing, appetite and somatic complaints.

THE SAMPLE

Since depressions comprise several distinguishable aspects, it is quite possible that a treatment might be efficacious for one kind of patient but not for another. It therefore seemed desirable to base the investigation on one prevalent and readily available type of patient. Preliminary examinations of the various hospital populations led to the conclusion that the largest, fairly homogeneous group of patients would be young women who were not beyond their middle forties and who showed no indication of the climacteric.

From this population of young women we sought to exclude patients considered to be psychopaths, patients who were addicted, patients who seemed to be suffering from a schizophrenic process, and patients with any kind of organic involvement which would be a counterindication for any one of the three treatments under consideration. Accordingly, the sample comprised the first 87 newly admitted female patients who met the criteria; 33 were under 30, 43 in their thirties, and 11 were in their forties. As they were accepted into the project, they were randomly assigned to the treatments: 27 to shock, 31 to iproniazid, and 29 to placebo.

Most of the patients who comprised the present sample should not be described as severely depressed. Despite the care with which they were selected, as a group they were symptomatically rather heterogeneous as treatment was initiated. Although formal diagnosis is a notoriously arbitrary and subjective matter, about one-third of the patients could be classed as manic depressive, one-third as neurotic depressive and one-third as reactive depressive. The inclusion of relatively asymptomatic patients in Table 1 may be explained in terms of the fact that most of the patients were quite suggestible, and found all the supportive attention involved in the intensive pre-treatment evaluation to be quite reassuring and generative of confidence and an improved sense of well being. Although such initial improvement detracts from the absolute magnitude of any differences occurring in consequence of treatment, and so reduces the sensitivity of the study, it should be noted that such pre-

TABLE 1

Frequency With Which the Various Standard Cluster Scores Based on Doctors' Symptom Ratings Were Found in the Total Sample of 87 Women

Symptom Clusters	Cluster Scores									
	1	2	3	4	5	6	7	8	9	10
1. Acute Anxiety	3	10	24	*14*	13	12	7	2	1	1
2. Conversion Hysteria	*63*	8	3	5	1	3	3	0	1	0
3. Manic State	35	*32*	9	7	3	1	0	0	0	0
4. Depressed State	8	10	13	*14*	9	9	14	10	0	0
5. Schizophrenic Excitement	16	*28*	26	13	3	1	0	0	0	0
6. Paranoid Condition	*61*	17	6	1	1	1	0	0	0	0
7. Paranoid Schizophrenia	40	*32*	8	6	1	0	0	0	0	0
8. Hebephrenic Schizophrenia	40	*21*	15	8	2	1	0	0	0	0
9. Phobic Compulsion	30	*16*	12	9	8	10	0	2	0	0

Median score for each symptom cluster is indicated by the italic frequency.

liminary therapeutic influences, like other incidental therapeutic influences, were equally available to all treatment groups and would not be expected to favor one treatment more than another.

The reader may be interested in the possibility of unintentional selective forces which could distort the composition of the sample. The most obvious possibility would be the selective loss of patients from any given treatment group because of treatment failure or family interference. Actually, relatively few patients were lost from the study after treatment was initiated. One was lost from the placebo group because she was precipitously removed from the hospital by her husband before the post-treatment evaluation could be undertaken. In the iproniazid group three were lost: one because she was getting worse and the hospital decided to use shock and subsequently resorted to insulin; another because she suddenly became extremely manic and untestable; the third because of a suspected malignancy necessitating surgery. In the group assigned to shock, two were lost because shock was so disliked and mistrusted that the patients were shortly removed from the hospital by their families. There were some additional patients who, in effect, were lost because they recovered spontaneously, were removed from the hospital, or developed physical complications before treatment could be assigned. One patient was rejected because of pre-treatment evidence of liver pathology.

Information concerning the background and circumstances of our patients was gathered by a social worker, who called on family informants (usually the husband, often the mother, occasionally the sister). Almost invariably, more than one member of the family was seen, but obviously the adequacy of the information varied appreciably from family to family. Nevertheless, a systematic and persistent attempt was made to secure background information.

Sixty-three of the patients had had outpatient treatment for their present illness before coming to the hospital. Fifty-nine of the patients were reported by their families as having had an earlier episode of this type, and 49 had been under medical care for an earlier episode. Only 31, however, had had a previous hospitalization for psychiatric reasons, and in only 11 of our patients was there indication of an earlier manic episode. Four were pregnant, but this fact was disregarded in the random assignment of treatment: two to placebo, one to iproniazid, and one to shock.

The families of 65 of the patients did not consider the illness to have had a sudden onset; of 59 it was reported that they had either harmed themselves or talked about harming themselves. Nine of the patients were reported by their families to have been alcoholic at some time. Characteristic wakefulness of the patients was reported infrequently (specifically, for only 16), and for only 11 was there a marked recent loss in weight. Somatic complaints at the time of acceptance into our project, although common, were not universal. Fifty-two of the patients complained of fatigue, 45 of weakness, 32 of anorexia, 31 of headaches, 25 of constipation, 23 of dyspepsia, 21 of coldness, 14 of dizziness, and only ten of myalgia. It is possible that these numbers underestimate the absolute incidence of these discomforts, but they may provide an indication of their relative prevalence.

Apparently psychologic disturbances are relatively prevalent among the families of these depressed patients. For example, a relative had been in a mental hospital during the adult life of 25 of the patients, and for 46 of the patients there was a record of an alcoholic relative. During the adult life of 18 of the patients a close relative had had a depression, and in ten cases, close relatives had attempted suicide. We do not have data revealing the extent to which the families of these women differed from families at large, but it seems likely that these families are

distinctive in their susceptibility to psychiatric difficulties.

It is possible to provide some description of our sample in terms of the usual social and economic indicators. Nineteen of the patients had had no more than a grammar school education, and only four had attended a four-year college. Thirty had attended high school but had not been graduated; 34 were graduated from high school, with about half of these gettings some further training. The fathers of 34 of the patients were described as skilled workmen, 18 as semi-skilled or unskilled, 23 as in the professional, managerial or clerical groups, four as service workers; the occupations of the rest were unknown. The occupational distribution of the husbands of these patients appears to be quite similar to that of the fathers. Ten of the husbands had incomes of $7,000 or more; 32 had incomes of $5,000 to $7,000; 23 had incomes reported to be under $5,000 per year, and the incomes of ten were unknown.

Twelve of our patients were single, 64 were married, seven separated, and four widowed or divorced. One curious characteristic of the sample is yet to be satisfactorily explained: very few patients appropriate for our study came to the hospital during the months of July, August, September and October.

PROCEDURES

Our study was necessarily large and intricate. Its use of several different criteria for the efficacy of treatment involved professionals who were appreciative of the various possible characteristics of depressive disorders. This required an interdisciplinary team from psychiatry, psychology, psychiatric nursing and social work, and involved the State system of mental hospitals.

A significant pattern of collaboration was developed between Rutgers, The State University and the State Department of Institutions and Agencies. Hospital personnel directly responsible for the care of the patients participated in the investigation as part-time members of the research staff. The full-time members of the project were appointed to the University as research specialists.

In the following outline, certain significant facets of clinical depression are interpreted in terms of standard tests and rating scales. These devices, applied on both a pre-treatment and a post-treatment basis, comprise the objective criteria for therapeutic change.

I. Depression as a Symptomatic Syndrome
   A. Wittenborn Psychiatric Rating Scales (26)
      1. Ratings by physicians
      2. Ratings by nurses
II. Subjective Dysphoric Aspects
   A. MMPI (13)
      1. Psychasthenia score
      2. Depression score
   B. Clyde Mood Scale (6)
      1. Friendly
      2. Energetic
      3. Clear-thinking
      4. Aggressive
      5. Jittery
      6. Depressed
III. Apathy of Externally Directed Motivation
   A. Rosenzweig Picture Frustration Test (20)
      1. Need persistence
      2. Ego defense
IV. Cognitive and Perceptual Slowing
   A. Conceptual
      1. Similarities, WAIS (23)
      2. Digit symbol substitutions, WAIS
      3. Numerical ability, DAT (4)
   B. Perceptual
      1. Latency, cube reversal (median latency in seconds based on three daily trials)
      2. Number, cube reversal (14) (median number of reversals

reported for three daily three-minute trials)

V. Motoric Slowing
  A. Reaction Time, Choice (3)
  B. Standard Interview, Mean Latency in Seconds of Responses to a Series of Questions (25)

VI. Somatic Complaints
  A. Physicians' Checklist

VII. Appetite
  A. Caloric Intake (5, 17, 19, 21, 22)

VIII. Anxiety as a Symptomatic Syndrome
  A. Wittenborn Psychiatric Rating Scales
    1. Ratings by physicians
    2. Ratings by nurses

In the opinion of many readers, the most practical evaluation of the relative efficacy of these treatments may involve a follow-up study of the post-hospital adjustment of the patient. Such a follow-up study is now in process but has not been completed for all of the patients. The results of this aspect of the study will form the basis of a subsequent report.

In our general procedure, the patient upon admission was viewed by the receiving hospital personnel from the standpoint of her possible participation in the depression study. If she appeared to meet the criteria for inclusion, the project psychiatrist interviewed and examined her to be sure that none of the excluding characteristics was discernible and that she met our criteria for inclusion. Evaluative study was postponed for patients still showing the effect of any pre-hospitalization treatment. Patients approved for inclusion were placed on a special high-caloric, vitamin-supplemented diet, and were submitted to a five-day period of pre-treatment observation and testing. Mental status, respiration, pulse and blood pressure data were recorded daily by the hospital physician. All testing and evaluating activities were conducted in a standard manner at a regularly appointed time each day to minimize the confounding effect of possible diurnal fluctuations.

The complete battery of psychologic tests was conducted in a standard fashion during the first three days of the five-day period, and during the fourth day specimens for the required biochemical tests were gathered. On the fifth day the final interview and observations by the hospital collaborators were completed, and at this time the Wittenborn Psychiatric Rating Scales used by the psychiatrist and the nurse were filled out independently.

Treatments were assigned at random after the fifth day of testing. The procedure was double-blind with respect to iproniazid and placebo, and only the person who recorded the random assignment knew the nature of each patient's treatment. Following the biochemical analyses, any patient showing evidence of liver pathology was removed from the study, thereby protecting her from the possible hazard of being treated by iproniazid in the presence of liver pathology.

This investigation was not concerned with a study of dosage. The medication was used according to the clinical judgment of the doctor treating the patient. He was provided with 25-mg. tablets of iproniazid or the indistinguishable placebo; maximal iproniazid dosage ranged from 75–150 mg. per day, with an average (median) maximum daily dosage of 125 mg. The maximum daily dosage for the placebo group ranged from 75–150 mg., with an average (median) maximum daily dosage of 150 mg. The use of electroshock, too, was guided by the usual clinical criteria; none had less than six, but very few patients had a full course of 20 shocks.

At the end of ten weeks, or sooner if the patient had recovered sufficiently to justify her leaving the hospital, the treatment was terminated. A period was provided for adjustment, and then the post-treatment testing, observation and rating were scheduled. The administration of the post-treatment testing, observation and rating was identical

with that of the pre-treatment period and requires no special description. In the case of the patients receiving shock, ten days were usually allowed between the last shock and the beginning of the post-treatment testing and observation period, so that the confusion or amnesia which often accompanies shock could be dissipated. This waiting period for the shock patients reduced the chances of getting a spuriously low post-treatment mental test performance. It is obvious that this possibility cannot be precluded completely, but in the presentation of the results the reader himself may judge the nature of any such possible loss.

DESIGN AND ANALYSES

In our particular study, statistical tests of significance for the numerous criteria had to be conducted for a common sample. This meant that certain kinds of errors which would contribute to the significances of any given test might also contribute to the significance of some of the other tests. This possibility accrued from the fact that many of the various criteria for improvement, including their sampling errors, were correlated within the common sample. There are several possible ways of correcting for this effect, but in our view the most practical defense from whatever hazards are inherent here must rely on independent replications. For this reason, the results for the first half and the last half of the sample were analyzed independently. Although this practical approach may be considered to be inelegant from the standpoint of a statistical purist, we felt it allowed certain greatly needed economies which more than justified its use.

In planning analyses for the data, one must prepare to answer one central question: Are the gains with respect to a given criterion greater for one treatment than for another? There are two approaches commonly employed in such situations. The simpler uses gain scores or difference scores. Such differences as these are known to be unreliable, however, and do not lend themselves to as sensitive a test of significance as does a more complex approach employing post-treatment scores which have been corrected for differences in pre-treatment scores. This use of adjusted post-treatment scores based on an analysis of covariance is by general agreement the method of choice for an investigation such as ours.

RESULTS

To compare the efficacy of the treatments, analyses of covariance were conducted for each of the various criteria. As indicated in the accompanying tables, *t*-tests were used to evaluate the significance of the difference between the respective adjusted post-treatment means for the total treatment groups. Independent analyses of covariance and the appropriate *t*-tests were also conducted independently for the first and second halves of the total sample. The primary descriptions of the results will be in terms of trends for the total treatment groups. In addition, however, the results will be reported with supplemental references to the independent analyses for the first and second halves of the sample.

Table 2 summarizes the total sample analysis for our composite rating scale criterion of depression as a clinical entity. Note that the adjusted post-treatment mean for the iproniazid group is significantly lower than the adjusted post-treatment

TABLE 2

Comparison of Global Symptomatic Improvement for Three Treatment Groups

Wittenborn Psychiatric Rating Scales

Depression-Doctors' Ratings

Group	Pre-mean	Post-mean	*n*	Adj. Post-mean	Intertreatment *t*		
					Shock	Iproniazid	Placebo
Shock	5.0	2.9	27	2.8			
Iproniazid	4.0	2.3	31	2.5	.6		
Placebo	4.9	3.7	29	3.6	1.5	2.2*	

* Significant at the .05 level.

TABLE 3

Comparison of Subjective Improvement for Three Treatment Groups

Group	Pre-mean	Post-mean	*n*	Adj. Post-mean	Intertreatment *t*		
					Shock	Iproniazid	Placebo
MMPI							
Psychasthenia Score							
Shock	22.4	11.7	24	11.1			
Iproniazid	21.3	12.5	30	12.5	.6		
Placebo	20.0	16.2	29	16.7	2.4*	2.0*	
Depression Score							
Shock	26.8	17.8	24	17.6			
Iproniazid	27.4	21.4	30	21.1	1.8		
Placebo	25.4	23.7	29	24.1	3.4†	1.7	
Clyde Mood Scale							
Friendly							
Shock	47.1	56.2	12	58.1			
Iproniazid	51.7	58.5	15	57.4	.2		
Placebo	50.9	47.8	12	47.3	3.3†	3.3†	
Energetic							
Shock	46.4	55.3	12	56.3			
Iproniazid	48.1	56.9	15	57.0	.2		
Placebo	50.3	50.1	12	49.0	1.9	2.2*	
Clear-thinking							
Shock	44.8	53.3	12	55.0			
Iproniazid	48.3	56.1	15	55.6	.2		
Placebo	49.6	47.7	12	46.5	2.5*	2.9†	
Jittery							
Shock	54.1	46.7	12	46.2			
Iproniazid	52.5	44.6	15	44.6	.7		
Placebo	50.6	50.8	12	51.3	1.9	2.6*	
Depressed							
Shock	53.8	42.6	12	42.5			
Iproniazid	53.1	44.1	15	44.1	.1		
Placebo	52.0	48.0	12	48.1	2.0*	1.5	

* Significant at the .05 level.
† Significant at the .01 level.

mean for the placebo group, indicating greater improvement for the iproniazid group than for the placebo group. For the first and second halves of the sample separately, the adjusted post-treatment means for the iproniazid patients are lowest but are not significantly different from those of the placebo group. The improvement for the shock group is not significantly greater than that for the placebo group in the total sample or in either half.

The symptom scales were rated independently by the physicians and by the nurses. Because the nurses merely observed the patients in a supervisory capacity and did not interview them or study them as individuals, they were not aware of many aspects of the patients' depression. As a consequence, their rating scales revealed much less pathology than did the ratings of the physicians, who studied the patients as individuals. Accordingly, only the analyses for the physicians' ratings are included in the present report.

Table 3 summarizes the analyses for the various subjectively experienced aspects of depression, which were evaluated by such devices as the MMPI and the Clyde Mood Scale. The Mood Scale was introduced in the last half of the sample, however, and as a consequence the analyses for this test are based on a relatively small sample.

With respect to the psychasthenia score on the MMPI for the total sample, both the shock group and the iproniazid group show a significantly lower adjusted post-treatment mean than does the placebo group, thereby indicating the efficacy of both of these treatments for reducing the subjectively experienced psychasthenic aspects of depression. Although these trends are not significant for the first half of the sample, they are for the second half. For the depression score on the MMPI for the total sample, only the shock group yielded an adjusted post-treatment mean significantly lower than that of the placebo. This sup-

riority of the shock group over the placebo group held for both halves of the sample.

The analyses for the Clyde Mood Scale show according to the adjusted post-treatment means, that both the shock group and the iproniazid group feel that they are more friendly and more clear-thinking after treatment than does the placebo group. The energetic score reveals an adjusted post-treatment mean which is higher for the iproniazid group than for the placebo group. The analyses reveal that, with respect to the jittery score also, the iproniazid group provides a lower adjusted post-treatment mean than does the placebo group. With respect to the depressed score of the Clyde Mood Scale, however, the greatest improvement was made by the shock group, which had a significantly lower adjusted post-treatment mean than did the placebo group. No significant differences in improvement were found with respect to the aggressive score of the Clyde Mood Scale.

In Table 4 the analyses are summarized for the ego defense score on the Rosenzweig Picture Frustration Test. (The need persistence score showed no significant differences between treatments.) The ego defense score was included in the study because of an assumption that it represented the outward direction of assertive needs which seems to be so deficient in depressed states.

TABLE 4

Comparison of Improvement in Externally Directed Motivation for Three Treatment Groups

Rosenzweig Picture Frustration Test

Ego Defense

Group	Pre-mean	Post-mean	*n*	Adj. Post-mean	Intertreatment *t*		
					Shock	Iproniazid	Placebo
Shock	9.8	8.4	25	8.3			
Iproniazid	9.7	10.6	28	10.5	3.1†		
Placebo	9.3	8.8	27	8.9	.8	2.3*	

* Significant at the .05 level.
† Significant at the .01 level.

TABLE 5

Comparison of Cognitive and Perceptual Improvement for Three Treatment Groups

Group	Pre-mean	Post-mean	*n*	Adj. Post-mean	Intertreatment *t*		
					Shock	Iproniazid	Placebo
Conceptual							
Similarities-WAIS							
Shock	9.7	10.5	25	10.2			
Iproniazid	9.5	10.8	31	10.6	1.2		
Placebo	8.6	9.2	29	9.7	1.4	2.7†	
Numerical Ability-DAT							
Shock	7.8	8.2	25	8.0			
Iproniazid	8.2	10.7	31	10.1	2.2*		
Placebo	6.8	7.1	29	7.8	.1	2.4*	
Perceptual							
Latency, Cube Reversals							
Shock	21.4	34.6	21	36.4			
Iproniazid	21.8	18.4	29	20.0	1.6		
Placebo	30.4	16.2	25	12.9	2.3*	.7	
Number, Cube Reversals							
Shock	32.8	31.0	26	32.4			
Iproniazid	40.2	56.3	31	51.5	3.5†		
Placebo	29.6	38.7	28	42.8	1.8	1.6	

* Significant at .05 level.
† Significant at .01 level.

For the total sample the data reveal that the iproniazid group is most distinctive in its improvement, with an adjusted post-treatment mean significantly higher than the adjusted post-treatment mean for both the shock group and the placebo group. This superiority of the iproniazid group to the placebo group was significant in only the second of the two independent halves, although the results in each were consistent with the pattern established by the total group.

Table 5 summarizes the analyses for the various measures which were considered to be relevant to the cognitive and perceptual

slowing which often accompanies depression. The cognitive aspects of a depression were examined by the use of tests which presumably involve a kind of conceptual or associational fluidity, as contrasted with rigidity or stereotypy of thought. Table 5 reveals that, on the Similarities subtest of the WAIS, the adjusted post-treatment mean for the iproniazid group is higher than the adjusted post-treatment mean for the placebo group. A trend confirming this superiority of the iproniazid group was found for both the first and the last halves of the sample, but was significant in the first half only. No significant differences in improvement in the Digit Symbol Substitution subtest were revealed by the data. It is apparent, however, that the iproniazid group showed the most distinctive improvement with respect to Numerical Ability on the DAT. Specifically, for the total sample described in Table 5 the adjusted post-treatment mean for the iproniazid group on the Numerical Ability subtest of the DAT was significantly higher than the adjusted post-treatment mean for either the placebo or the shock group. This pattern is less clear in the analyses for the two halves of the sample, which reveal instability in the shock group; in the first half we find both the iproniazid and the placebo groups to be significantly superior to the shock group, but in the second half both the iproniazid and the shock groups are significantly superior to the placebo group. Nevertheless, the apparent trend in both halves confirms the superiority of the adjusted post-treatment mean for the iproniazid group which was revealed in the total sample.

The perceptual aspects of a depression were examined by the use of the *latency* and the *number* of reversals for the Necker Cube. With respect to the *latency* of the initial reversal reported in the Necker Cube Test, for the adjusted post-treatment means in the total sample, the shock group is significantly slower than the placebo group. The two halves of the sample show some instability for both the iproniazid and the shock groups. In the first half of the sample, the shock group is significantly slower than either the iproniazid or the placebo group. For the second half of the sample, however, the iproniazid group was slower than the placebo group. Here we have an unexpected trend: neither iproniazid nor shock is superior to placebo with respect to reducing latency of initial response. It should be noted that the latency score, a median of three observations only, may be quite unreliable.

When we consider the *number* of reversals reported in a three-minute period, however, the iproniazid group is found to have an adjusted post-treatment mean significantly higher than that of the shock group. This pattern, which appeared to characterize both halves of the sample, was significant in the first half only.

Table 6 is relevant to the motoric retardation of many depressive disorders, and reveals a superiority for iproniazid. No treatment was significantly superior with respect to choice reaction time. With respect to latency of verbal response in the Standard Interview situation, however, the improvement in the iproniazid group was significantly superior to that in either the placebo group or the shock group. In the first half of the sample the iproniazid group was sig-

TABLE 6

Comparison of Motoric Improvement for Three Treatment Groups

Standard Interview

Mean Response Latency in Seconds

Group	Pre-mean	Post-mean	*n*	Adj. Post-mean	Intertreatment *t*		
					Shock	Iproniazid	Placebo
Shock	2.99	3.43	25	3.26			
Iproniazid	2.65	1.80	28	1.75	3.3†		
Placebo	2.12	2.64	27	2.90	.8	2.6*	

* Significant at .05 level.
† Significant at .01 level.

nificantly superior to both the shock group and the placebo group. In the second half of the sample the trend was in the direction of an iproniazid superiority, but did not meet the conventional five per cent criterion for significance.

The treatment groups were also compared with respect to change in incidence of somatic complaints as recorded on a standard checklist which the physicians filled out daily during the pre-treatment and post-treatment evaluation periods. Fatigue, the most conspicuous somatic complaint, showed the greatest change, but there were no significant differences between the treatment groups.

Caloric intake was carefully recorded for the various portions of each day during the pre-treatment and the post-treatment evaluation period. In the total sample, the shock group was significantly superior to placebo with respect to increase in appetite. In the first half of the sample, the shock group was significantly superior to both the iproniazid group and the placebo group, but this trend was not maintained in the second half of the sample.

There were no significant differences between the groups with respect to improvement in anxiety as evaluated by the Wittenborn Psychiatric Rating Scales.

In the various tables, for the total sample it is useful to observe that with respect to most of the criteria appreciable *gains from pre-treatment to post-treatment* were enjoyed by all three clinical groups. On the basis of the global rating for depression, summarized in Table 2, all three groups made a significant improvement. Table 3, summarizing the data for the subjective aspects of depression, shows that the improvements from pre-treatment to post-treatment were invariably significant for the shock group and for the iproniazid group. For the placebo group, however, only two of the measures—psychasthenia on the MMPI and depressed on the Clyde Mood Scale—showed significant improvements. The analyses for the motivational changes represented by the Rosenzweig showed a loss for the shock group on the ego defense score, and a significant gain for both the shock and the placebo groups for the need persistence score. As to the cognitive and perceptual aspects of depression, there was a significant improvement for the iproniazid group in the two perceptual and the three conceptual scores which were analyzed. The placebo group showed a significant improvement in all tests but two—latency on cube reversals, and numerical ability. The shock group showed a significant improvement in only one test, the Similarities subtest. Obviously the improvements on the perceptual and conceptual tests must be viewed in the light of the possible effects of practice. There was no differential effect in practice from group to group, however, and this factor would not bias intertreatment comparisons. Only the iproniazid group showed a significant post-treatment reduction of latency of response in the Standard Interview. The doctors' ratings on anxiety revealed a significant decrease in anxiety for all three treatment groups.

The assumptions involved in the method of analysis of covariance were not fulfilled in all instances. For example, there were some reliable differences between the treatments with respect to the regression of the post-treatment scores on the pre-treatment scores. This was found for the psychasthenia score for the MMPI, the cube latency score, the numerical ability score, and the clear-thinking score. Such differences in regression ordinarily imply that there has been a difference in the efficacy of the treatments, and that there may be some kind of interaction between treatment effects and initial level.

Several of the significant *t*-tests were based on covariance analyses which had not been significant at the .05 level by the *F* test. Specifically, the *F* was not significant for caloric intake, for the physicians' rating scales for depression, for the cube

latency, or for the energetic, clear-thinking, and depressive scores for the Clyde Mood Scale. Nevertheless, with the exception of the caloric intake and cube latency variables, the significant *t*-tests reported were sustained in their implications by the independent analyses for the two halves of the sample. Because of extreme skewing of their distributions, atypical results were expected for these two variables.

Some readers may view *t*-tests which follow insignificant *F* tests with reservations. When these analyses were planned, however, it was considered that placebo was different in kind and quality from the active treatments, and could be compared with either of them regardless of the *F* tests. Since the implications of these *t*-tests were sustained in the part analyses and agree in their general implications with the other *t*-tests, the writers believe that the differences which generate them are reliable. They should not be viewed as merely an instance of a *post hoc* selection of adventitious differences which meet a significance criterion for *t* and thereby circumvent a discouraging *F* test.

DISCUSSION

These data show that all three methods of treatment can be accompanied by appreciable clinical improvement. This beneficial change is apparent not only for the composite cluster score of depression as a clinical entity based on the physicians' ratings of symptoms, but also for the various additional tests used to evaluate changes in the major features of a depressive state. Of greater interest, however, is the fact that the data are consistent with a hypothesis that both iproniazid and shock are more efficacious than is placebo in contributing to improvements in depressive conditions. Although it would be difficult to justify a claim that iproniazid is generally superior to shock in relieving a depressive state, it should be noted that our composite clinical rating for depression revealed iproniazid to be superior to placebo without revealing a like superiority for shock.

It may be most instructive at this point to note the ways in which the therapeutic effect of iproniazid appears to be different from that of shock. From the standpoint of the Similarities subtest on the WAIS and the Numerical Ability subtest on the DAT, iproniazid appears to be superior to placebo, but shock shows no such superiority. As a matter of fact, shock is not superior to placebo with respect to any of the perceptual or conceptual tests, and in two instances—number of cube reversals and Numerical Ability on the DAT—iproniazid is superior to shock. It should be noted also that iproniazid is superior to both placebo and shock in terms of improvement in the ego defense score of the Rosenzweig. On the basis of these trends, we infer that iproniazid may be more efficacious than shock in producing improvements in general alertness at the time of post-treatment testing.

If we consider the subjectively experienced mood of the patient, it is apparent that both shock and iproniazid are superior to placebo. Our data do not justify a claim that there is an important general difference between shock and iproniazid. Nevertheless, it should be noted that, with respect to the Depressed score on the Clyde Mood Scale and the Depression score on the MMPI, the adjusted post-treatment means for the shock group are more favorable than those of the placebo group, but such a superiority is not apparent for the iproniazid group.

Caloric intake, although initially promising as an objective indication of appetite, proved to be unsatisfactory in the last half of our sample, where several members of the shock group who were overweight were found to be voluntarily restricting their food intake. Accordingly, the indication provided in the first half of the sample (that the shock patients ate more) could not be confirmed in the last half.

For the fact that choice reaction time and latency of response to questions do not con-

firm each other in their implication for the superiority of iproniazid, we offer an *ex post facto* explanation. In choice reaction time testing, the performance may depend in part upon motivations imposed by the testing situation, whereas, latency in response to questions may be expressive of the patient's motivational readiness to participate in an interpersonal exchange.

The objective tests and ratings used as clinical criteria, although generally pertinent and adequate for the purposes of this study, are far from comprehensive. Some of the most practically important aspects of improvement are those concerned with relatively long-term changes. Comprehensive follow-up studies are being conducted for all patients one year after post-testing. Much of this work has been completed for the first 44 cases and may be briefly described here. Duration of hospitalization may be considered as relevant to efficacy of treatment, and we found in our follow-up survey that among the first 16 placebo patients, seven had been discharged before the end of the tenth week, six more before the end of the twentieth, and three after 20 weeks. Among the first 14 iproniazid patients, seven had been discharged before the end of the tenth week, four more before the end of the twentieth, and three after the twentieth week. Among the first 14 treated by shock, only three had been discharged before the end of ten weeks, six more before the end of the twentieth week, and five after 20 weeks. There are no significant differences between these groups, but if this trend continues through the rest of the sample, shock will appear as the treatment requiring the longest hospitalization. We also considered the number of weeks each patient was maintained on the assigned treatment before post-treatment testing; here, too, the count favored iproniazid, although no significant differences were found between the three treatment groups.

Each family was asked whether it had noticed any change in the patient during her hospitalization. For two of the placebo patients the families saw no change; change was reported for all the iproniazid patients, and no change was reported by the family of one of the shock patients. When the families were asked whether they saw any change after hospitalization, seven of the 16 placebo patients were reported as "the same" or "worse," whereas only two each were described as "the same" or "worse" in the iproniazid or shock groups. The families were asked also about post-hospitalization psychiatric treatment for the patients. It was found that eight in the placebo group had had such treatment, while seven each in the iproniazid and shock groups had post-hospitalization psychiatric treatment. There were very few re-hospitalizations among the patients for whom follow-up studies have been made (two in the placebo group, two in the iproniazid group, and one in the ECT group).

From the clinical standpoint, the presence of side-effects becomes a matter of considerable interest when evaluating the efficacy of iproniazid (1, 2, 9–12, 15, 24). The collaborating physicians in the hospitals were asked to record all side-effects on a special form, which included 34 possible side-effects. It is always possible that some of the side-effects were either overlooked or not recorded by the doctors; at any rate, there were relatively few. Within the group of 29

TABLE 7

Comparison of Appetite Improvement for Three Treatment Groups

Caloric Intake

Three-Day Total

Group	Pre-mean	Post-mean	*n*	Adj. Post-mean	Intertreatment *t*		
					Shock	Iproniazid	Placebo
Shock	5290	6231	27	6438			
Iproniazid	6006	6274	31	6148	.8		
Placebo	5863	5674	29	5615	2.1*	1.4	

* Significant at .05 level.

placebo patients there were 37 recorded instances of side-effects, involving a total of six patients. Within the group of 31 iproniazid patients, 68 instances of side-effects were reported, involving a total of nine patients. No patients developed jaundice. In the placebo group, insomnia was reported by five patients. No other side-effects characterized as many as four. In the iproniazid group, six different side-effects characterized as many as four or more patients. The most prevalent was headache, involving seven patients; the next most prevalent was weight gain, involving six; five each had dizziness and dryness of the mouth, and four each complained of restlessness and drowsiness. These side-effects tended to be associated with each other in such a way as to suggest a syndrome or pattern of toxic response to iproniazid. For example, three patients showed five of the six specific side-effects listed above The manner in which the most prevalent side-effects characterized a common group of patients is indicated in Table 8.

In the planning of such an investigation as the present one, certain imponderables are involved which can be gauged correctly only on the basis of experience. We knew at the outset that for any relatively homogeneous group of patients, such as the one we have employed, the admission rates were sufficiently conservative to require the lapse of an appreciable period of time before a large enough sample could be accumulated. Since, however, our investigation was designed to illuminate the efficacy of a currently promising drug, we were caught up in the dilemma posed by the importance of a prompt and timely investigation on the one "horn," and the requirement for sufficiently large homogeneous samples to show the significance of important trends on the other. On the basis of the trends revealed in the first half of our sample, we hoped that an equally modest second half would be sufficient to permit a confirmation of the major significant trends.

TABLE 8

Multiple Incidence of Most Prevalent Side-Effects for Iproniazid

Patient	Side-Effects					
	Headache	Weight Gain	Dizziness	Dry Mouth	Restlessness	Drowsiness
0034	×		×	×	×	×
0318	×		×	×	×	×
0946	×		×	×	×	×
0302	×	×	×			
0813	×	×	×	×		
0827	×	×		×		
0225	×	×			×	
0914		×				×

Unfortunately, the second half of the sample was more heterogeneous in several respects than the first half and, in general, less severely depressed. As a further complication, one which tended to obscure some of the trends, several of the women in the shock group happened to be dieting. It seems that, in some cases, at least, severely depressed patients start eating more as they improve, but some of the moderately depressed ones who may have been compulsive eaters start eating less as they improve. It is therefore probable that, among women of this age range, appetite as a function of recovery may vary in its implications according to the initial degree of illness. Thus we can adduce several reasons why the second half of our sample did not provide significant confirmation of all the trends revealed in the first half. Nevertheless, there is sufficient confirmation between the two parts of the sample to reveal the definite main trends which are significant for the total sample and to provide the desired evaluation of the treatments.

The trends provided by the total sample and the consistency found between the first and second portions of the sample are sufficient to indicate that iproniazid is an efficacious treatment, clearly more efficacious than placebo and apparently as

efficacious as shock. The results concerning the appearance of side-effects do not reveal iproniazid to be sufficiently disagreeable to be a deterrent to ordinary clinical applications and, in the present sample, its use did not result in any patient's being removed from treatment.

Cole *et al.*, in a definitive review (7) of recent clinical literature on psychopharmacologic agents currently being used in the treatment of depressions, have estimated most conservatively the efficacy of iproniazid relative to ECT. They state: "In conclusion, the data suggest that while iproniazid is nowhere nearly as generally effective as ECT, it may produce dramatic clinical improvement in a small proportion of severely depressed patients and significant improvement in a larger proportion, depending upon many as yet undefined factors." The reviewers note, however, that the uncontrolled clinical studies of iproniazid have been enthusiastically positive. It is necessary, therefore, to examine this investigation with comparative reference to other controlled studies. Perhaps in this way it may be possible to reconcile the strong positive implications of our study with the more conservative implications of others. In attempting to reconcile these differences we shall consider such factors as the nature of the sample, the adequacy of the criteria, and the control of the conditions of treatment.

In a letter to the *British Medical Journal* in 1959, West and Dally (24) referred to a "blind" trial conducted with 28 atypical depressions treated with iproniazid for a period of four weeks. These patients were compared with a control group receiving an inert placebo. The basis for comparison appeared to be a grading of clinical improvement into the categories "none," "slight" and "marked." Nineteen of the iproniazid group fell into the "marked" category, while only one of the placebo group was judged to show marked improvement. Although we cannot be confident of the nature of this sample of patients, in the light of our experience the degree of improvement seen in the iproniazid group is not so remarkable as is the paucity of improvement reported for the placebo group. It should be noted that their comparisons were based on "blind" trials, but admittedly not "double-blind" trials. Perhaps this limitation in design permitted some subjectivity to enter their results, particularly when one considers that their criteria appear to be judgments of unspecified improvement. Unfortunately, we have no way of knowing the nature of the improvement observed, whether the same kind of improvement was generally observed, or whether the nature of improvement varied greatly from patient to patient. These writers made an interesting and encouraging reference to side-effects. Specifically, they reported only two cases of jaundice (neither fatal) among over 1,000 patients they have treated with iproniazid.

In the same year Cole *et al.* (8) reported on a controlled study of the efficacy of iproniazid in the treatment of depression. These investigators employed a heterogeneous sample of patients comprising all diagnostic categories and similar only in that depressive features were sufficiently conspicuous to be included in the admission diagnosis. Both males and females were included among the 89 patients, and most were over 50 years of age. Shortly after admission the patients were assigned at random to one of three treatment programs: iproniazid, psychotherapy or placebo. The criteria, Lorr's MSRPP and the MMPI, were applied initially and again after six weeks of treatment. No significant differences were found between the treatment groups. In the present study significantly greater improvement was found for the iproniazid group than for the placebo group on both the depression score from the Wittenborn Psychiatric Rating Scale and the psychasthenia score from the MMPI. The question arises: How is it possible that the present investigation yields positive results, whereas the study by Cole *et al.*

showed no significant superiority for iproniazid? As these investigators note, their sample is quite heterogeneous; heterogeneity of samples reduces the precision of an investigation by making it more difficult to show a reliable trend. It is possible that some homogeneous subsample would have shown a reliable benefit for iproniazid. In addition, it should also be noted that their sample was substantially older than ours; they were, in effect, treating a different kind of patient. Furthermore, they were using a Mann-Whitney test for significance, a test less sensitive than our analysis of covariance. They also treated their patients for a shorter period before evaluating their results. Thus, despite the similarity of treatment and criteria, the studies are dissimilar with respect to sample and general procedure.

In 1960 Rees and Benaim (18) reported a complex study evaluating iproniazid in the treatment of depression. Their controlled, fully blind analysis was based on a sample of 20 newly admitted hospital patients with a diagnosis of depressive states, and used in a counterbalanced cross-over design where each patient had three-week periods of treatment with iproniazid interspersed with similar periods of placebo treatment. The criteria were of two kinds: symptom rating scales and a global clinical estimate of improvement. No significant differences were found between the iproniazid and the placebo trials. In commenting on these results, we should note first that their sample may have been quite heterogeneous—its exact composition with respect to age, heterogeneity and diagnostic make-up was not reported. In addition, their rating scale procedure may have been relatively informal and unstandardized, thus reducing the chances of reliable trends. Global clinical estimates are always hazardous in research because they may have a different meaning for each patient. Because of the slow-acting, cumulative nature of iproniazid, it is quite possible that their cross-over design, employing uninterrupted, successive three-week intervals of iproniazid and pl cebo, may in effect have resulted in a confou ding of the two treatments and thereby g atly reduced the opportunity for optima discrimination between their respective e ects. Thus we see that the Rees and B naim study, although using iproniazid and placebo, is not similar to our stu y in sample, criteria or treatment.

The same year produced another controlled study of iproniazid (15) with which we should attempt to relate our results. Using a sample of 81 male and female hospital patients, most of them over 50 years of age and suffering from endogenous or involutional depressions, Kiloh *et al.* employed three different treatments: placebo, iproniazid and ECT. The trial period was of at least three weeks' duration. Where no improvement in the iproniazid patients was shown after three weeks, ECT was employed. Criteria appeared to be an unspecified clinical judgment graded into five levels of improvement: worse, unchanged, slightly improved, greatly improved or symptom-free. For purposes of analyses, these were summarized as either good results or poor results. Good results were ascribed to 11 per cent of the placebo cases, 54 per cent of the iproniazid cases, and 89 per cent of the ECT cases.

It is difficult to interpret these percentages. First, since a double-blind procedure was not employed, subjectivity may have distorted these results, particularly for the placebo group, which showed a very low rate of improvement. Second, the assignment to treatment appears not to have been random, and *may* have been selective. Also general improvement ratings are always meaningless, because one never knows what has improved and what has not. In general, however, the iproniazid-placebo comparisons are quite encouraging, and are consistent with the implications of our study. Their improvement rate for the electroshock group may be misleading, inasmuch as patients on iproniazid who were unimproved at the end of three weeks were then assig ed

to E T. In this way the iproniazid rate was depr ed of those patients who might have show improvement after three weeks, whe as the shock rate may have been inflate by those patients who were slow to impr ve. Because of the self-limiting, episodi nature of depressions, this advantage for t e shock group may have been consider ble.

Di crepancies in the implications of studi s of the evaluation of treatment obviou y may have various origins. Most of the apparent discrepancies that the present writ rs have observed, however, appear to be due to differences in samples—which means, in effect, that the investigators are not in a position to generalize to comparable populations and, unfortunately, in some instances may not be able to specify the nature of the population to which they can generalize. Similar confusion seems to arise from differences in criteria and the fact that investigators often may be unable to generalize to the nature of the changes represented by their own set of judgments or ratings. Beyond this, there are the obvious limitations in design and in the use of criteria which may be not only too few in number but also actually defective for both conceptual and methodologic reasons. These difficulties may be generated by a pressure for "hurry-up" evaluations of promising new therapeutic procedures. As a matter of fact, the present investigation, although conceived in deliberation and conducted according to the availability of suitable patients and not in response to urgently needed information, was restricted somewhat in sample size by our hastening to a termination in response to the current nature of the interest in iproniazid. These considerations and many others are elaborated in a recent article by Liberman (16).

SUMMARY

The present study examines the relative efficacy of shock, iproniazid and placebo in the treatment of hospitalized patients. The patients, pre-menopausal women with a primary diagnosis of depression, were assigned in random order to one of the three treatment groups. Addicted patients, schizophrenics, or patients with a physical disorder which would contraindicate any one of the three treatments were excluded. The treatment programs were conducted according to the clinical judgment of the hospital physician in charge of the patients. The general procedure was one where women were selected for study shortly after admission, tested and examined for a five-day pre-treatment period, carried on the assigned treatment for a maximum of ten weeks (less if they recovered early), and then resubmitted to the five-day post-treatment testing and observation. The iproniazid-placebo assignments were made on a double-blind basis. Eighty-seven women were involved: 27 were assigned to shock, 31 to iproniazid, and 29 to placebo.

The present study recognizes the varied symptomatic manifestations of depression and employs one or more criteria for each of the major clinical manifestations, as well as a composite symptom rating scale score for depression as a general clinical entity. Analysis of covariance was employed to examine the relative efficacy of the three treatment programs. These analyses were conducted independently for each of the criteria and were replicated for the first and the second halves of the sample. In general, the trends revealed in the half-sample analyses confirm those for the total analyses; nevertheless, not all of the half-sample analyses met conventional criteria for significance. Tables are provided which summarize the results for the total sample. Results for the half samples are referred to in the description of the results.

The results may be summarized as follows:

1) Both iproniazid and shock are found to be superior to placebo.

2) Generally speaking, iproniazid is not found to be superior to shock, nor is shock found to be superior to iproniazid.

3) Iproniazid appears to be more promis-

ing than shock with respect to the intellectual, perceptual and motoric retardation in depression.

4) Shock may be superior to iproniazid with respect to the alleviation of the subjective aspects of depression.

5) All three treatment programs reveal improvements greater than those predictable from chance alone. Some of this general improvement surely reflects the fluctuating, self-limiting nature of many depressions.

Although the present report refers to follow-up studies now in the process of completion, it is primarily a study of objective criteria which are relevant to the clinical aspects of the patients' condition at the time of post-treatment evaluation. Systematic evaluation of the long-term improvement will be provided in a forthcoming report.

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PRE-MORBID ADJUSTMENT AND FAMILY STRUCTURE: A COMPARISON OF SELECTED RURAL AND URBAN SCHIZOPHRENIC MEN[1]

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This report is concerned with certain sociopsychologic traits of schizophrenic male patients from two disparate culture areas of Kentucky. One of these areas is metropolitan and reasonably representative of modern American industrial society. The other is rural and relatively insulated from the mainstream of cultural change in an increasingly urban civilization, and retains many of the characteristics of a rapidly disappearing agrarian way of life. The problem under investigation is whether certain aspects of personality assumed to derive in part from culturally defined social interaction differ appreciably for schizophrenics drawn from such distinctive sociocultural backgrounds.

Using Merton's approach to sociocultural structures, we have assumed that these structures exert pressures upon the individual either to accept or to reject the patterns of behavior acceptable in the larger culture (19). We therefore assumed that the sociocultural setting is related to social deviation. It has been noted that the incidence and distribution of mental illness are related to social variables (4, 6, 8, 10, 12, 15, 20, 22). This does not imply causality, but it does suggest that the social variable is worthy of further study. In the isolating of these variables there is no implicit rejection of genetic, organic or psychodynamic processes; rather, there is the suggestion that human behavior is enormously complex, that functional psychoses are the result of the interaction of the psychogenetic and the social, and that perhaps behavior is therefore best approached simultaneously from different research levels.

In this study an attempt has been made to view schizophrenia in relation to specific cultural and familial settings. Personality is shaped within a cultural framework, and is mediated through the family. Family structures found in the two sociocultural backgrounds studied are different, and these differences, it is hypothesized, lead to different role perceptions and contribute to differences in adjustment prior to psychotic breakdown.

The rural setting delineated for inquiry remains a relatively isolated mountain area, and it is possible to ascertain its ethos or the inter-related themes which bind together its way of life. Briefly summarized, the area may be described as familistic and patriarchal, characterized by a puritanic religious creed, and a culture which places great emphasis upon individualism and human endeavor. In contrast to this, large urban areas, which are more typical of the mainstream of American culture, are characterized by nuclear rather than extended families, and by much less contact between father and son than is generally true in this rural area. There are certain resulting ramifications which seemed to be important for this study.

Sex-role identification for a boy would seem to be easier in this rural area—as in most other rural regions—than in an urban area. This point of view has been expressed by Erikson (7), Gorer (9), Kluckhohn and Spiegel (13), Cavan (5) and Levy (16).

[1] Adapted from a longer report by the author, "A Cultural Comparison of Schizophrenia in Mountain Rural and Urban Kentucky." Unpublished Ph.D. dissertation, University of Kentucky, 1960, supported in part by a Southern Fellowships Fund Award.

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The decision-maker and authority figure in the rural area under consideration is the father. In cities it appears more often to be the mother. That is, the instrumental leadership of authority roles between mother and father in the family group situation is apparently reversed in the two types of background. This seems to be a cogent factor to consider, because studies of male schizophrenics coming chiefly from urban backgrounds emphasize either the pattern of mother domination or a situation where the demands of the schizophrenogenic mother are impossible to meet and hold the boy in what Bateson terms a "double-bind," in which he cannot please and from which he cannot escape (1, 14, 18, 24). The Hagerstown Study of parental authority behavior and schizophrenia illustrates the point that more schizophrenic males report mother domination than father domination, whereas normal males more usually report the reverse (14). In discussing the personal backgrounds of 53 schizophrenic subjects, Weinberg writes: "The typical maternal picture was that of an unstable though domineering, somewhat over-protective figure, who instilled a marked dependency into the children and yet incurred their hostility. In four instances the father had this domineering role, but generally he was a passive or indifferent figure" (28).

In addition to the classic picture of mother domination in the life of the urban schizophrenic male, one must also see the other side of the coin, that is, of paternal inadequacy. Paternal inadequacy does not seem to fit in the rural area of the current study, although some differences among families are to be expected.

Religion is likely to be an important factor in understanding the personality of the rural boy. It may be an important factor in the lives of individual schizophrenics from the urban area, but the total urban culture is not influenced by religion as is this rural one. Brought up with puritanic yet individualistic beliefs, the rural boy values religion as a subjective emotional exper ience. This is perhaps to be expected when one considers that the physical isolation o this area has contributed to a high degr e of seclusion from the rest of the world. l oud, emotional preaching, hand-clapping and foot-stamping are common, and the s clusion of the area has made the religious r eeting of supreme social importance (11, 27). Such a subjective religious training might well result in deep guilt feelings on the part of the individual who believes that he has deviated from the religious mores of his group, and religion may be one of the areas of tension in this particular rural environment. We are using the word *tension* here in Sullivan's sense of *producing anxiety*. He stated: "It [tension] arises not from the impact of physico-chemical and biological events . . . but from the impact of people. The felt component of any of this congeries of tensions includes the experience of anxiety: action which avoids or relieves any of these tensions is experienced as continued or enhanced self-respect or self-esteem significantly different from what is ordinarily meant by self-satisfaction" (25).

It seems logical, then, to predict that different environments will impose different tensions upon their members, and that the psychotic as well as the so-called normal will, at least in part, be a product of his cultural milieu. If we gain but a little understanding of these tensions as they center in a functionally psychotic human being we will have added to our understanding of mental illness and its treatment and prevention.

Both the research rationale and hypothesis result from certain theoretical assumptions. These assumptions grow out of what is known about the particular rural subculture, about urban culture in general, and about schizophrenia. It is assumed that some degree of deficient role functioning is usually associated with schizophrenia. One manifestation of this is inadequacy in ex roles. Role functions are learned behav or,

and are learned within the family. The family in turn reflects the normative patterns and processes of the broader sociocultural background. The normative family structure of the rural family in eastern Kentucky is patriarchal, with sharply defined differences between male and female roles. The normative family structure of the urban family is more nearly equalitarian, with less clearly defined sex role differentiation (3, 7, 16). The hypothesis, following from these assumptions, is: *The pre-morbid adjustment of the rural subjects will be significantly better than that of the urban subjects as measured by the Phillips' Scale.*

This hypothesis is based upon the rationale that, if the sociocultural background of the rural subjects provides a "better" milieu for role identification, they should have a better adjustment score. It is assumed that other social factors related to the schizophrenia of the rural subjects are not more serious than the factors assumed for the urban subjects. The factors assumed for the patients from the urban setting have been discussed before. (Briefly, they are that the father figure provides an inadequate role-identification figure, at the same time that the mother figure is overprotective or dominant.)

The subjects used in the study were male patients diagnosed as schizophrenic in the Veterans Administration Hospital in Lexington. No patients were included who had undergone such operations as prefrontal lobotomies or who had known organic disorders.

The total files of the hospital were inspected to obtain the sample of rural and urban subjects. Initially, 32 rural *Ss* met the requirements of residency and diagnosis, but during the course of the study nine were discharged. In addition, one refused to cooperate. Six were added during the course of the study by new admissions. We began with 29 urban *Ss*. One was too ill to respond, and so reduced the urban sample to 28.

The rural *Ss* had spent the first 16 years of their lives in the selected counties of eastern Kentucky. Only men who had spent their childhood on farms were included. This was considered to be necessary to exclude the possibility of biasing the sample with men whose parents' backgrounds were urban, or whose occupations at the time their children were growing up might give them a different socioeconomic status. The selected counties were those categorized as most rural on a rural-urban continuum of Kentucky counties (2).

The metropolitan subjects were third-generation urban dwellers from Louisville and Cincinnati-Covington. The groups were matched to some extent for age, occupational and marital status, although there is, of course, a very real problem in actually matching occupations between rural and urban groups. As would be expected, the rural group was entirely Protestant; the urban group contained 15 Protestants and 13 Catholics. The Catholic group was examined together with and separately from the urban Protestant group. There were no significant differences.

The Phillips' Scale is a prognostic instrument which utilizes data pertaining to the adjustment characteristics of the patient from early adolescence to psychotic breakdown. The specific adjustment characteristics with which it is concerned are those of a social and sexual nature. High scores are associated with poor prognosis (23).

The Phillips' Scale is so structured that it can be completed from case history data,

TABLE 1

Age, Marital Status and Occupation of Rural and Urban Subjects

Group	Age			Marital Status		Occupation				
	Under 30	30–40	40–50	Married	Single	Professional	White Collar	Skilled	Farmers	Unskilled
Rural	6	13	9	14	14	3	—	5	20	—
Urban	5	14	9	13	15	2	4	4	—	18

but case history records show wide differences in the content, at least, in the hospital from which these *Ss* were drawn. It was therefore decided to supplement the case history data needed to fill out the Phillips' Scale with family interviews, using the case histories to complement and partially validate the interviews. When the interview material was not corroborated by case history data the *S* concerned was not included in the analysis of pre-morbid adjustment. Fifty-one schedules were completed.

The results are shown in Table 2. The hypothesis was sustained by the evidence. It is obvious from the results that marriage is a significant factor in the evaluation of pre-morbid adjustment and its implications for prognosis, but the differences between scores of rural and urban *Ss* cannot be attributed to differences in the marital status of the two populations. The results lend support to those studies which have suggested that there is a relationship between parental authority roles and schizophrenia. In the rural subculture under consideration the boys, generally speaking, have a strong father-figure with whom to identify, and so may be expected to make a good adjustment to male role requirements.

TABLE 2

Mean Scores on Phillips' Scale of Specified Groups of Rural and Urban Subjects

Group	N	Mean Score	Difference Between Means	p^*
Rural	26	12.3	6.9	.001
Urban	25	19.2		
Urban Catholic	12	18.5	1.2	.6
Urban Protestant	13	19.7		
Rural Married	13	9.5	5.7	.01
Rural Single	13	15.2		
Urban Married	10	15.4	6.4	.001
Urban Single	15	21.8		
Rural Married	13	9.5	5.9	.02
Urban Married	10	15.4		
Rural Single	13	15.2	6.2	.001
Urban Single	15	21.8		

* Probability of chance occurrence of difference measured by *t*-tests.

It would seem that the social character of a subcultural group may be seen not only in its so-called normal members but also in its deviants, and that different social and family structures will create different tension areas for their members.

The better adjustment of the rural group prior to psychotic breakdown lends support to the rationale that the sociocultural background of the rural *Ss* is "better" than that of the urban *Ss* as far as prognosis in schizophrenia is concerned. Length of hospitalization may be a confounding factor. If, however, the urban *Ss* have been hospitalized for longer periods than have the rural *Ss*, this would still tend to support the hypothesis, unless it can be shown that rural *Ss* are less likely to remain hospitalized than are urban *Ss* with schizophrenia of comparable severity. This matter merits attention. A long-term study of new admissions from both areas would appear to be called for.

As has been noted, 51 families were interviewed. The primary purpose of the interview situation was the obtaining of data with which to score the Phillips' Scale, but in the course of gathering this information the writer gained some insightful impressions of the relationship between various situational factors and emergent psychoses. Some of the background factors which appeared to be particularly relevant were 1) parent-child relationships, 2) religion and 3) absence from home.

Because the information was impressionistic and gathered incidentally, it cannot be presented in statistical form. The recurrent reporting of some conditions, however, suggests that they were probably related to the *Ss*' difficulties, and these are included with the other findings because they suggest fruitful areas for future research.

1) Parent-child relationships appear to be perceived by both rural and urban

families as a problem area, although the emphasis within each group is different.

In the rural group, the picture of a very severe father (or father-surrogate who, in three cases, was a stepfather), feared by the son, seemed to be common. Sometimes this was verbalized freely, in words such as, "X always feared his dad." At other times it was less direct: "Their dad was always pretty strict with the boys. They minded him, but they favored me." Or, "Y had a mighty row with his dad. He must have been 16 then. He even left our church and joined another. He and his dad never did speak much after that."

In the urban group one finds a pattern which might be expected, that of the *Ss* being very "tied to" their mothers. Statements such as the following illustrate the point: "B was much quieter than his brother, and liked to stay home with me." Or, "J was very attached to mom. He broke down when she died." Or, "R always loved me [mother] best, but that's natural for a boy, isn't it?" Or, "D's mother wanted all his love—she never liked me [wife], and I had to bring him here when she died. He went crazy-like."

Statements such as these seem to be in general accord with what we know of the rural milieu, and what has been written about the family situation of many urban schizophrenic males.

2) In the view of many rural families, religion was a factor related to the *S*'s psychotic breakdown. A few excerpts from the interviews will illustrate this point: "He went to church every night—he was never hardly at home." "He began asking his friends if they'd been saved. He scared them off." "S began reading the Bible all the time. He'd stand on the table to say grace. Nothing we'd say would stop him." "R took religion—and he never has been the same." In only two cases in the urban group was religion mentioned. In one, *S* was said to have been "religious and lonely all of his life." In the other, "J grew nervous about his job, then he went and became a Catholic. He was better for a while, and then he grew even more nervous."

3) The data gathered here are only impressionistic. But a sociosituational factor which was voluntarily reported with considerable frequency in the family interviews was the separation of *S* from his family home. Fifteen rural and three urban families appeared to connect *S*'s illness with this factor. The rural figure appears to be quite substantial.

The total question of psychosis and mobility is a vexing one, and conclusions cannot be drawn from the material here presented.

Absence from home or Army service seemed to be associated with psychotic breakdown in the case of many rural *Ss* in our study. It may also be associated with the breakdown of urban *Ss*, although their pre-morbid adjustment scores suggest that they were less well adjusted prior to military service than were the rural *Ss*. The "drift" hypothesis cannot be considered to be a factor for those whose breakdown began in the Army. The "initial selection process" of migrants likewise would not seem to be related to military service. There is the possibility, however, that those away in military service may be more apt to migrate. Unfortunately, our information is not sufficiently detailed to indicate the exact onset of psychosis. Some *Ss* were first hospitalized when in military service. Others "seemed quiet-like" or were "a bit queer" on discharge, but worked on the farm or perhaps migrated to Ohio before the final breakdown. One sees again the need for detailed case history studies in which these strands could be separated and thus seen in clearer perspective.

In any event, some of the rural breakdowns appeared to begin in military service, and thus would be relatively free of some of the compounding elements normally found in those breakdowns related to spatial mobility. In these cases it seems reasonable

to suppose that the problem of assimilation is the most important. The relative cultural isolation and the subjective religious training of the rural Ss suggest that the problem of assimilation might be greater for them than for the urban Ss, and thus contribute to the withdrawal into self which is characteristic of schizophrenia.

Finally, the evidence suggests that absence from home and psychotic breakdown may be especially related for the rural Ss. This, too, supports the findings of many studies (17, 21, 26).

CONCLUSIONS

Rural man is perhaps better adjusted than is urban man for life in his own environment, but not necessarily for life outside of the cultural milieu of his childhood. The Phillips' Scale is more a measure of primary than of secondary group adjustment, and since all the men were schizophrenic, the results obtained indicate that being well adjusted in one setting does not always indicate the possibility of a good adjustment in another. Finally, it might well be that the authoritarian family structure of the rural area, which, on the one hand, appears to be conducive to better premorbid adjustment in its young men, might, on the other hand, make them less flexible. If this is the case, adjustment for men from this type of cultural milieu might be more difficult in alien situations than for men from other areas.

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SOME NOTES ON THE AUTHORITY STRUCTURE AND THE RESPONSIBILITY OF ADOLESCENTS IN THE GEORGE JUNIOR REPUBLIC

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The George Junior Republic, in Freeville, New York, founded in 1895, is one of the oldest child-caring institutions in the United States.

From the outset it has been at once a community, a school, and a social agency dedicated to the service of young people with problems. It is of interest to psychiatry as indicative of the importance of milieu in the treatment and training of children.

The Junior Republic covers 900 acres of open country. In its 26 buildings, about 185 teen-age boys and girls and 85 staff members live and work.

From its earliest years the Junior Republic has propelled the resident adolescents toward assumption of a greater measure of responsibility than has been usual for young people in our society. This it has sought to bring about through the creation of a more or less self-contained community in which the young people govern and are producers and required to pay for services received. From the start there was recognition of the roles adults must play in the guidance of adolescents. But the adolescents were soon given (and continue to have) a degree of authority in the regulation of their conduct, and of responsibility for their own maintenance, which as far as we are aware is unmatched anywhere.

The nineteenth century was rich in Utopian experiments. Brook Farm, New Harmony, Shaker Village added their charm to American history and passed from the scene. The community founded by the late William R. George reflected something of this faith in the perfectibility of man. It proved to be more durable than many of the other social experiments, perhaps because it never aimed at the total reconstruction of society they sought, but only at the better training of youth; and perhaps too, because it has been, as we shall suggest in a moment, so characteristically American in its persistent themes.[2]

In its structure, the Junior Republic still reflects the preoccupation of the nineteenth century with questions of government, jurisprudence and economics. It is something of a bridge from that century to this in that its establishment was part of the humanitarian and reformist activity advanced by such people as Jacob Riis, Jane Addams and Theodore Roosevelt, and in that, during the last 30 years, under the leadership of the present director, Donald T. Urquhart, it has sought to incorporate applicable advances in the behavioral sciences.

Government and economics continue to be important at the Junior Republic. The young people are called citizens. They have their own laws (which are printed), these laws deriving from their town meetings, held once a month. The laws, as well as the regulations of their various departments and bureaus, are enforced by the young people. They have their own police force. They have courts, which are conducted with dignity and with considerable juristic sophistication. The courts adjudicate civil disputes and try criminal cases. They are empowered to sentence citizens to fines and to terms in the workhouse. For a citizen, being in the work-

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[2] In its early years the Junior Republic attracted national attention. Of the many articles listed in periodical guides, probably the most scholarly was the study made in 1898 by John R. Commons, at that time Professor of Political Economy at Syracuse University (5).

house does not mean incarceration, but it *does* mean extra hours of work, without pay, in the evenings and on Saturdays, as well as restrictions on his social activities. The young people's government has the means to enforce the sentences of its courts.

The government pays its officers, and also for such other goods and services as printing and rent. It is financed through taxation of the citizen body.

The young people, the citizens, must pay for services rendered—not only for government, but also for board and room, and for such luxuries as cigarettes and sodas. They must pay import duties proportionate to their worth on packages from home. They must also pay the costs of off-campus trips and other recreational activities.

The young citizens are given the opportunity to earn the money they need. Most attend school for half the day, and work at some other job the other half. They are paid in accordance with performance for the work they do in both areas. School is thus structured as legitimate work—for pay—for this age group. They are paid in a token currency, minted and printed, which has the reality for them that United States currency has for us. The opportunity is given to all to earn enough to pay for what is, in the reference of the Republic, a high standard of living.

Citizen self-support and self-government are perhaps the Republic's most striking features. But there are of course other elements in the structure, and it would not be possible to say that one is more important than another in its impact on young people. The shop, the cottage, the school, the church, casework—all are important influences in what is, in fact, a closely integrated community (1, 6).[3] Indeed, the Junior Republic has the major attributes of a miniature society, with a culture[4] which is reflective of American ways, but which at the same time has features peculiarly its own. We may profitably examine the Junior Republic in terms of its cultural patterns, bearing in mind that we in psychiatry share with anthropologists a curiosity about what makes different kinds of human nature.

Anthropologists try to uncover the themes running through the societies they study.[5] In the Junior Republic culture, a conscious theme, one shared by young citizens and staff members, is that the unmaking and the remaking of human nature are the proper business of the community. This purposive reshaping takes place within an authority structure in part manifested in formal and explicit ground rules, but also expressed in other, much more numerous rules that are only implicit, that derive from custom and tradition, that operate out of awareness, but that in all cases form part of the climate of expectation with which the young citizen must come to terms.

Our first thesis is, that the learned cultural conventions of a situation are very compelling upon the individual. The particular choices of patterns of behavior by a subgroup (like family, school or profession), while slightly idiosyncratic in any situation, are in most ways commentaries upon and definitions of a general cultural pattern which exerts its force upon the subgroup and the individuals composing it.

Our second thesis is that the structure of the situation will in part determine the amount and kind of learning which will take place. For example, in a classroom a young person will learn about a subject, such as mathematics, *and* about classroom behavior,

[3] *Cf.* Vinter and Janowitz (14), who maintain that the major limitation in the therapeutic programs of most institutions for "delinquents" derives from the segmented, piecemeal character of services offered, which do not "wholly infuse" the entire institutional program.

[4] We employ the term "culture" in speaking of the Junior Republic because of the close-knit character of the community. We recognize, however, that the Junior Republic evidences subculture-like phenomena within the total culture.

[5] Goldschmidt (7) objects to "pattern" and "theme" in this context as terms borrowed from esthetics, and as unscientific. However, other authorities in anthropology have accepted this usage (3, 12).

and about a particular class and a particular teacher's practice—all as co-operative-reciprocal patterns of classroom behavior. In a hospital, patients learn how to be sick, and how doctors, nurses and others behave, and a good bit about free time and restricted activity (2). A point to note here is that people learn fully as much from aspects of an experience which are out of their awareness as they do from aspects of which they have conscious knowledge (13).

It is important that educators and therapists be able to take into account the principles and specifics of group dynamisms—which brings us to our third thesis, that in becoming aware of culturally determined forces which have formerly operated out of awareness, we can begin to think of employing these forces more effectively in the treatment and education of youngsters (8). Similarly, in becoming aware of absent and excluded phenomena, we can begin to plan for their introduction if desired.

The forces of cultural convention and of structure operate in intriguing fashion in the miniature society of the Junior Republic. The Republic is in one sense a single institution, expressive of a generalized cultural pattern. Yet, like the larger society, it is comprised of many organizations and institutions. Each of these subordinate units—*e.g.*, the school, the print shop, the cottage—has a measure of autonomy, and each has authority structures comparable to schools, shops or dwellings elsewhere. But neither their autonomy nor their authority is absolute; administration functions to encourage unity in diversity, and the main themes of the Republic program find particularized expression in all of the subgroupings in the program.

We suggested earlier that these themes are characteristically American (9). They include the belief that the community, a melting pot of youngsters from varied backgrounds, should afford equality of opportunity to all, regardless of race, religion or creed. As in the larger society, egalitarianism lives side by side with the recognition of individual differences in needs and skills. Paradoxically, perhaps, the community sanctions both conformity to an approved code of behavior (including speech, grooming, table manners, boy-girl relationships and work habits) and drive for individual achievement. In every area, in ways both subtle and obvious, the individual is urged to assume responsibility for himself. The individual can and should better himself, and his "success" will in great part depend upon his own efforts. There is a great stress upon work, upon the acquisition of skill, upon *doing*. At the same time, in the conscious thought of both staff members and most youngsters (after they have been in the program for a while), there is the conviction that a person should seek the help he needs, and be ready to give a boost to the other guy. Withdrawal from social intercourse is frowned upon: the adequate citizen is seen as one who mixes with his fellows.

It is surely significant that, among the young citizens, the forces supportive of the citizen government and of the officially stated purposes of the Junior Republic consistently enjoy moral ascendancy—that is, they can be said to represent "public opinion," whereas those who oppose the government, who verbalize cynicism about the Republic, are in an unpopular minority. Parenthetically, we may observe that this relationship of valences results in a climate favorable for treatment (using "treatment" in the sense of searching for more effective ways of living).

Virtue is seen as residing in social acts and as deserving of tangible rewards. We have already pointed out the importance of economics at the Junior Republic. Attitudes toward earnings may reflect attitudes toward work, and attitudes toward work can in turn be expressive of attitudes toward people. It would take us too far afield to attempt to explain how, at the Junior Republic, money functions as a medium of emotional and intellectual exchange; suffice it to say

that the dollar is—as elsewhere—a prime symbol in the little Republic (10).

When we speak of the themes which pervade a given situation (in this case, a small, self-contained community), we are speaking of values, of beliefs and of goals *as authority*. The meanings of authority are many. We have been considering structure and its associated explicit and implicit expectancies as elements in the chemistry of response. In this respect, structure characterizes the relationships—authorizes the relationships—in that it is both the cause and the explanation of their having a particular cast. Structure marshals experience and gives it a unique character. In a parallel way, for purposes of literary presentation, the author of any book, in accordance with a complex of cultural and personal suppositions, disciplines his experiences in a particular area of life (or at least his perceptions of these experiences). Subject to his own and to society's assumptions, the author is authority for the form and content of his work.

Again, we may speak of authority as a referent, and in that sense we cite a learned person or a dictionary as an authority.

Relatedly we use the word as a synonym for assurance, for self-confidence, and say of someone that he speaks or acts with authority, meaning that he does not appear to be afflicted by self-doubt, but appears to be guided in his acts by solid convictions.

With reference to groups, we have stressed that much of the culturally determined pattern and expectation operates outside the awareness of the participants. The same observation is made in individual psychology, where it is now widely accepted that historically determined responses of permissibility and impermissibility are part of the dynamics of a person's mind, and that these bents to responses of a particular kind are forces which operate largely outside of his awareness. In psychoanalytic theory, authority—which may be either impelling or restricting—is conceptualized as part of the superego, and as being constituted of the more or less insistent demands of the conscience and of a structure of ideals. Here again, then, as with the culturally shaped pattern, the demands which emanate from within the individual and which condition his behavior (and that of others) operate largely out of awareness.

We must consider authority also in terms of identifications made, in particular the identification young Americans frequently make of authority with adulthood. Adolescents may have a good deal of feeling about one or the other of these, as external (generalized) forces bearing upon themselves, and the feelings about the one can easily carry over to the other, conditioning their behavior in any number of quite specific situations. Further, the feelings which youngsters have about authority and adulthood in general will influence in an important way their willingness to accept for themselves the types of behavior associated with authority and adulthood.

We have been speaking in general terms. But in the case of a real, live youngster, what may be referred to as his attitude toward authority is made up of a complex of responses derived from quite specific experiences—indeed, out of a complex made up of a great number of related but still distinguishable sequences of responses not likely to be entirely homogeneous. That is to say, aspects of authority and adulthood for a particular youngster will be differently charged as they present themselves to him in different areas of life.

This brings us again to influences that are or can be operative in milieu therapy but are excluded, or are at least excluded from the same full consideration in clinical therapy. A milieu such as the Junior Republic makes it more nearly possible to bring into focus all of the meanings of authority we have been considering, and to employ

them most meaningfully in the treatment and education of the child.

In such a milieu, all of these meanings of authority we have been considering are operative. It is possible in terms of quite specific behavior and relationships for us to bring these meanings into our awareness, for the better informing of our approach in the treatment and education of the child. We spoke earlier of the authority structures and of the measure of autonomy possessed by the separate institutions which, taken together, make up the Junior Republic. We spoke of the common themes animating these subgroups, and of the traditionally determined expectancies, frequently operating out of awareness, with which the young citizen is confronted on every hand. We have referred to the Junior Republic as a miniature society.

A notable aspect of the Junior Republic is precisely this: that here the young person encounters and is encouraged to come to terms with authority in all of the many senses of the word—authority as personified in certain adult and peer-government figures, as explicitly defined and as implicit in situation, as external to himself and as a problem of his own doubts and certainties.

If we consider authority as the right to make decisions, we shall put in sharpest contrast the practice of the Junior Republic and that of such other institutions as hospitals or public schools.

Hospitals have a simple authority structure as experienced by the patient: if he wants to get out of bed and go outdoors he may ask the nurse, but she will refer the matter to the doctor, who will make the decision. Beyond that, the hospital staff is organized on hierarchic principles, with decisions handed down from the top. In public schools the teacher is the sole authority in the classroom, the youngster usually being referred to the principal or to his parents only in the case of some infraction.

The situation is quite different at the Junior Republic, where decisions are made both by the young citizen and by staff members in all areas of the program.[6]

[6] The following excerpt from the Junior Republic's Staff Manual is illuminating: "Adults are responsible for the conduct of the program at the Junior Republic; obviously the program includes the operations of the citizen government.

"The powers of the citizen government derive from powers vested in the Board of Trustees, as defined by the laws of the State of New York, and as delegated by the Board to the Director and through him to the staff. There is no begging the responsibility of the staff for everything that happens to young people at the Junior Republic, including responsibility for what happens to them in interaction with their government. Adolescents generally, and the young people at the Republic in particular, do not have judgment sufficiently mature to make all of the decisions affecting their care and education. It is well-known, however, that citizen self-support and self-government are cornerstones in the Junior Republic's program, and we know that 'for the citizen the government draws its significance from the amount and kinds of responsibility and authority which have been delegated to it, and from the respect which adults have for its established rights of jurisdiction.'

"The administration, with the help of the staff, must determine in what areas the citizens can profitably exercise jurisdiction. It has the further obligation of defining as clearly as possible what these areas are. Once these areas of jurisdiction have been stated, it behooves the entire staff to respect these stated rights of the citizens and their government.

"From time to time, the administration may find it necessary, in the interests of the young people, to restrict or to enlarge these areas of citizen jurisdiction. This will always need to be done forthrightly, without subterfuge, and with proper notice to the young people.

"That the actual, operational rights of jurisdiction of the citizens should correspond to their stated rights is essential to the integrity of the citizen government. It is only as citizens have confidence in the integrity of their government that they can profit from its ministrations.

"Involved in this, too, is the honesty of the staff in its dealings with the young people. Again, it is necessary that the actual rights of the citizen government should correspond to the rights defined for it by the administration, if the young people are to be confident that the staff members mean what they say.

"On the one hand, our policy will be undermined if the citizen leaders are permitted to move into areas placed outside of their jurisdiction by the administration. On the other hand, the integrity of the citizen government will be undermined, and the honesty of the staff will be put in question

For instance, in the Republic the responsibility for housing is a reciprocal relationship between the citizen and the houseparents. Since the citizen is a paying boarder, if he wishes to change his residence within the Republic he can plan this. He must discuss it with his proposed new houseparent, and she may require a recommendation or commentary from his current housemother. He may be under persuasion from other citizens of the Republic, or his social worker may encourage him to consider various aspects of the proposed move, but his responsibility for his housing still remains a reciprocal relationship between him and his houseparent.

Similar reciprocal relationships hold for citizens and staff members in the work program. We mentioned earlier that most of the young people go to school for half a day and do other work for half a day. They are employed in a variety of areas—print shop, cabinet shop, sewing-room, kitchens, dining-rooms, farm and so on. The adults in charge are known as employers. They may hire and fire citizen employees at their discretion, dock them for infractions of rules, raise wages in recognition of good performance. The young citizen in turn seeks out his own place of employment, and may leave if he chooses and seek another job. He is, however, under some compulsion to work, for if he does not earn enough to pay his weekly housing bill he will, as a vagrant, be violating the law, and will consequently come into a different kind of relationship with his government: he will be arrested, brought before the court, and placed in forced employment (the workhouse) so that he can earn enough money to pay his way. But this, again, is a responsibility not of the Director but of the citizen and of other citizens in the government.

An employer may dismiss one of his citizen employees, or a citizen employee may leave his job for reasons that others think are wrong. The point is, what is communicated to the youngster everywhere in the program is that it is right to make a decision, to take responsibility. This is one of the things that establish the atmosphere of the Junior Republic, that give it character as a real society. It is not guarded all the way through the echelons in its rightness. Decisions are not channeled through the hierarchy to the Director, but must be made at all levels and in all areas. Responsibility is thus thrown on the individual—on the individual staff member and on the individual youngster (11).

The youngster is confronted with this necessity to make decisions and so to assume responsibility in all the multiplicity of his relationships in the community.

To return to our theses, we observe with reference to the Junior Republic that its cultural conventions serve to impel the individuals living in the community in the direction suggested by us in presenting its main themes.

We observe also that the structure of the Junior Republic, its organization as a miniature society with an integral culture, makes possible for the young people in residence rich and varied learning, going beyond the classroom, beyond the therapist's office, to include government, job, home, church—in short, how to get along with self and others in many social situations.

In this paper we have tried to develop the following sequence of thought:

1) Patterns of expectation operate in culture (including the Junior Republic culture) often out of the participants' awareness.

2) This is in itself an important awareness, born out of observation, which impels us to further observation, bringing into awareness more and more phenomena of social relationships.

3) What is brought into awareness may thereby become subject to control.

4) In the miniature society that is the

if staff members take the easy way out of dictating (or of giving undue aid) in areas of citizen jurisdiction or when staff members directly assume roles proper to government functionaries" (4).

Junior Republic are both the willingness and the means to bring hitherto hidden interpersonal processes into the light of consciousness and to modify them as it is possible and as it appears desirable to do so.

5. Experimental data of importance to society, to educational theory and, in particular, to milieu threapy may thereby be derived.

What we have presented is by no means a full picture of the Junior Republic. We have suggested something of the rewards which closer study of the Junior Republic may offer toward a better understanding of the importance and functions of the milieu in the treatment and training of children.

The Republic has the advantages for study which anthropologists find in small, simple societies. While it is sufficiently complex and inclusive of varied social phenomena to express principles operative in any society, it is yet small enough for its behaviors, beliefs and interrelationships to be studied in their totality.

And just as it can be studied in its totality by professional workers, so can it be experienced and, on differing levels, understood in its totality by the young people who are its citizens.

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BEHAVIOR THERAPY IN A CASE OF TRANSVESTISM

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INTRODUCTION

Transvestism may be defined as a desire to wear the dress of the opposite sex, sometimes associated with a wish to be looked upon and socially accepted as a member of this sex (25).

It should be distinguished from transsexualism, in which, in addition to exhibiting the above symptoms, the male patient believes that he is really a woman, and demands surgical conversion of his anatomic sex. Lukianowicz, following a thorough review of the extensive literature on this subject, concluded that "our therapeutic possibilities are still extremely limited." The present paper describes the treatment of a male transvestite by means of aversion therapy.

We have been unable to find any account of this treatment applied to transvestism prior to our preliminary report (3), but a satisfactory response to aversion therapy in a case of fetishism was reported by Raymond in 1956 (35). Davies and Morgenstern in 1960 (9) discussed the possible use of this treatment in transvestism, but abandoned their attempts when an organic basis for the condition in their patient was discovered. The treatment is based on the hypothesis that the aberrant behavior has been acquired as a learned response, and must be abolished along the lines dictated by the laws of learning.

CASE HISTORY

The patient, the 22-year-old son of a coal miner, gave no pre-morbid medical history and no family history of mental disorder. He had a sister aged 30 and brothers aged 25 and 15, all healthy. He had had an elementary school education and had left school at 15. He was a "good mixer," although he did not play games. He had been a truck driver since the age of 18, and in recent years had engaged in such masculine sports as weight-lifting and physical culture.

The patient described a recurrent desire to dress in female clothing which had begun at the age of eight, when he found his sister's dress on a bed, put it on, and admired the effect in a mirror. Despite the apparent incongruity of a 16-year-old girl's dress fitting her eight-year-old brother, he maintained that this account was true. Subsequently he wore her clothes to relieve tension whenever the opportunity arose, but did not derive erotic satisfaction from the activity until after the age of 15. On these occasions, orgasm was generally preceded by a "peculiar feeling," starting in the lower abdomen and radiating throughout his body. Since puberty he had masturbated infrequently, but this had always been accompanied by transvestite fantasies. During two years of overseas service with the Royal Air Force he continued to practice transvestism, using clothing bought for that purpose.

The patient had not had sexual intercourse before his marriage at the age of 21. Both partners stated that sexual relations

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were satisfactory and that they had intercourse about three times a week. The patient denied resorting to female clothes or fantasies during intercourse. Although sexually attracted to his wife, he confessed that he had married in the hope that his abnormal behavior would cease. Shortly afterward however, he resumed his transvestism, dressing in his wife's clothes and using her cosmetics. On several occasions he had wanted to appear in public in this attire, but had actually done so only twice. He was strongly motivated to seek psychiatric advice, both by his fear of being detected in this behavior and by the encouragement of his wife, who had only recently learned of his abnormality.

On examination the patient was a well-spoken, athletic man, six feet in height and weighing 170 pounds, with normal genitalia and secondary sexual characteristics. No abnormal physical signs were noted. In superficial contact the patient appeared to have a well-adjusted personality. IQ scores were 107 (Progressive Matrices) and 97 (Mill Hill Vocabulary). The electroencephalogram showed some medium voltage theta activity in the temporal and frontal areas at the end of hyperventilation, but this was considered to be compatible with his age. Cells taken from the buccal mucosa for chromosomal sex determination were sex-chromatin negative, *i.e.*, male. His electrocardiogram and chest x-ray were normal.

TREATMENT

PREPARATION OF STIMULUS

We consider that it is of the utmost importance to prepare the conditioned stimulus carefully, so that it corresponds exactly to the patient's perversion and does not include any material without significance to the behavior under modification. The stimulus is therefore a highly individual affair and will naturally vary from one transvestite patient to another, according to the precise nature of his behavior. Our patient was not excited by the texture or feel of women's clothes, but only by the total effect of dressing in them and viewing himself in a mirror. We therefore decided he need not wear or handle the clothing during treatment (although this may be indicated where the fetishistic aspect of the perversion predominates).

Prior to treatment, 12 35-mm. colored transparencies were taken of the patient in various stages of female dress. They ranged from panties only to fully clothed. Six were full-face, six profile. Before allowing himself to be photographed, however, the patient insisted on dressing in private before a mirror, the whole procedure lasting about 30 minutes. Later he appeared to enjoy exhibiting himself to psychiatrists and psychologists while the photographs were being taken. It was observed that he invariably adopted a model's stance, with hands extended, arms internally rotated and one knee partly flexed. In the interest of accuracy in timing the conditioned stimulus, it was considered preferable to take a series of still photographs rather than to make a film, although Raymond used the latter method in the boosting treatment for his fetishist.

A tape recording was also made of the patient reading from a script as follows: I am.....(name). I have now put on and am wearing a pair of ladies' panties. I am .....I have now put on and am wearing a pair of ladies' panties and a suspender belt.....etc., until all items of clothing were mentioned. The object of this was to reinforce the conditioned stimulus and to insure the presence of the stimulus even when the patient's eyes were closed during vomiting. It was also designed to facilitate generalization of whatever learning might take place.

TREATMENT PROCEDURE

The patient was put into bed in a darkened room with a film projector mounted behind the head of the bed and a 48″ screen

set up at the foot. A close watch was kept on his physical condition throughout treatment, and temperature, pulse and blood pressure readings were taken every two hours. Fluids only were given during the first 48 hours, after which the patient was given a light diet. During the entire treatment he was given liberal fluids and daily injections of parentrovite. A psychiatrist/psychologist team was in constant attendance, and special nursing facilities were provided.

Aversion therapy was continued every two hours for six days and six nights; the mainstay of treatment was apomorphine. As soon as the injection was acting—the patient usually reporting a headache followed by nausea—a slide was projected onto the screen and the tape recording played back. While the stimuli were being presented the patient was strongly encouraged to watch the screen. His co-operation was excellent. The stimuli were continued until he either vomited or became intensely nauseated. At the beginning of treatment he was given one injection of sterile water every two hours to exclude the possibility of a placebo response and to insure that no pseudo-conditioning was taking place. This procedure also introduced him to the technique to be adopted. He then received 66 emetic trials, one every two hours, the trials consisting of the following:

53 intramuscular injections of apomorphine
1 intramuscular injection of emetine hydrochloride
5 oral doses of emetine hydrochloride in a glass of saline
1 dose of two dessertspoonfuls of mustard in a tumbler of warm water
3 doses of two tablespoonfuls of salt in a tumbler of warm water
3 intramuscular injections of sterile water.

The last three were introduced during the treatment to test for conditioning in Pavlovian terms. On the first and last of the test injections there was no evidence that a conditioned response had been established. In fact, after the last injection of sterile water the patient noticed the difference and protested that he had been tricked. On the second occasion, however, he complained of gastric discomfort, and retched after the slide had been shown and the tape started, suggesting the possibility of a conditioned response.

The dose of apomorphine varied between gr. $\frac{1}{40}$ and gr. $\frac{1}{8}$. Following the first injection of apomorphine hydrochloride, gr. $\frac{1}{10}$, the patient vomited profusely for three minutes, and intermittently for a further 95 minutes. He perspired freely, soaking his pajamas, and for a short time was in a semi-collapsed condition. For the next trial the dose of apomorphine was therefore reduced to gr. $\frac{1}{20}$. This dosage produced satisfactory emesis for the next few trials, but then the patient developed marked apomorphine tolerance, doses of gr. $\frac{1}{8}$ failing to induce vomiting, although still causing such side-effects as nausea, headache and dizziness (which continued until the conclusion of treatment). Similar tolerance developed to emetine hydrochloride, given in doses of gr. $\frac{1}{2}$ to gr. 1 in saline. Following the first trial with emetine, gr. 1, copious vomiting occurred, although earlier trials with apomorphine had produced only nausea and slight retching. Subsequently, emetine hydrochloride, gr. $\frac{1}{2}$, produced vomiting after a long interval and with the assistance of faucial stimulation by the patient. At a still later trial, however, this same dosage, administered intramuscularly, failed to induce vomiting. Fortunately, no cardiovascular complications attended the use of this preparation.

Mustard in water was used on the twenty-sixth trial, after several failures to produce vomiting with apomorphine. On this occasion, vomiting, helped by faucial stimulation, occurred six minutes after the drink. To continue with this emetic, which produced great gastric discomfort, seemed needlessly cruel.

The principal response desired was vom-

iting, and this was invariably obtained in the early trials. In later ones, because of drug tolerance, the response varied between headache, nausea and vomiting, and vomiting alone. Up to trial 37 the stimulus was presented at the latest possible time before vomiting occurred, but in subsequent trials this procedure was modified because of the absence of vomiting, and the stimulus was introduced as soon as the patient complained of any unpleasant effects from the drug. The first effect noticed was usually headache. The stimulus was terminated as soon as the patient vomited or reported relief. In the first 38 trials, the first slide (panties) was always shown to build up a conditioned response, but in subsequent trials the other 11 figures were introduced at random to generalize this response to all aspects of cross-dressing.

On the premise that cerebral stimulation facilitates conditioning, the patient was kept awake by oral administration of dextroamphetamine sulfate (Dexedrine), given shortly after vomiting had ceased. Initially, 5 mg. were given every six hours, but during later trials this had to be gradually increased to 5 mg. every three hours to combat the cumulative sedative effect of apomorphine and sleep deprivation. A detailed chart was kept throughout treatment, showing emetics used, interval between stimulus and vomiting, duration of vomiting, and so on.

During the greater part of the treatment the patient's physical and mental condition remained excellent. We were concerned about the possibility of dehydration and salt depletion and even gastric hemorrhage following repeated injections of apomorphine, but fortunately none was observed. Some idea of the patient's condition can be gained from the fact that, after five days and nights on this régime, he insisted on cleaning his room and washing the walls, maintaining that he wanted some "occupational therapy." Several visits from his wife boosted his morale during treatment, and he also had frequent discussions with doctors, psychologists and nurses between injections. Care was taken to avoid any possible effects of suggestion during these informal talks. After several trials he admitted feeling a deep sense of humiliation every time he saw himself on the screen. He even wondered whether a deliberate attempt was being made to make his reactions to the pictures more unpleasant than was strictly necessary. He described the slides and the female attire as a "disfigurement" which he had now grown to resent, and eventually he found it difficult to imagine that the sensation that he had obtained from cross-dressing could ever have been pleasurable.

Eventually the patient succumbed to the rigors of the treatment, and, when this occurred, it was rapid. The original plan had been to give him a total of 72 emetic trials, but the last four had to be abandoned because he became increasingly irritable and confused. After the sixty-eighth trial he expressed hostility to his medical attendants, and developed rigors and a temperature of 99°. His blood pressure rose to 160/100 mm. Hg for the first time. His co-ordination was impaired, and he was unable to maintain a normal conversation. Dextroamphetamine was believed to be partly responsible for his mental symptoms. Although he experienced difficulty in getting to sleep at the end of treatment, he responded well to amylobarbitone sodium, gr. 6, and, after sleeping for a few hours, made a complete recovery.

The problem was fully discussed with the patient's wife during her visits to the hospital, and her attitude toward her husband's symptoms was greatly improved by the understanding she gained from these interviews.

PROGRESS

The patient and his wife were interviewed on three occasions during the three months following treatment. Each time they stated that recovery was complete, and expressed their relief at the removal of this obstacle to the happiness of their marrriage. During the last interview the patient reported that, at

his wife's request, he had recently put on her green skirt, a garment which had previously excited him, but had felt completely indifferent to it.

The patient has now left this country, but six months after completion of treatment he wrote us reporting the continued absence of his symptom and expressing complete confidence in his future. The prediction of symptom substitution inherent in the psychoanalytic theory has not so far been borne out.

LITERATURE

Transvestism has been mentioned in the medical literature since Hippocrates described its incidence among the Scythians, attributing it to excessive horse-riding. Hammond (20) ascribed its occurrence among the Pueblo Indians to the same cause, allied to "exuberant masturbation." The condition was deliberately produced among these people, and the resulting "*mujerados*" were dressed in female clothing and took part in ritualistic, homosexual orgies during their religious spring festivities. The widespread occurrence of the condition may be gauged from the report of Ford and Beach (12), who described transvestism as being "considered normal and socially acceptable for certain members of the community" among 49 out of 76 non-Western societies under survey.

Numerous etiologic theories have been advanced, most based on environmental factors. Gutheil (17) and Barahal (2) described patients who felt that their parents had really wanted a child of the opposite sex; these authors ascribed the condition to the patients' premature preoccupation with and eventual confusion concerning their own sexuality. In view of the high value placed on male offspring in most cultures, acceptance of this theory would lead us to expect that the condition would be more common in the female. Interestingly, both of these writers based their theory on the treatment of female cases. Guiraud (16) believed that the parental practice of dressing children in the garb appropriate to the opposite sex was responsible, and London (24) and Karpman (22) incriminated this practice as a form of punishment. Lukianowicz (25) and Bender and Paster (5) suggested that transvestism developed from the child's urge to achieve the favored status of a "little girl" and his consequent pretense of being one. Close "visual contact" with female sexual exhibitionism by the mother was regarded by Friend (13) as the important etiologic factor. Greenacre (15) spoke of similar behavior by "a sister relatively close in age," as instanced in the patients of Berman (7) and Karpman (22). The Freudian theory considers transvestism as a protection against the fear of castration by creation of an imaginary phallic woman and subsequent identification with her.

Unfortunately, all these opinions are based on small numbers of cases, and no controls were used by any of the investigators. There is no evidence that the condition is hereditary, and, although some authorities (8, 18, 31) believed that genetic and endocrine factors were responsible for transvestism, this theory was exploded by the discovery (4, 29, 30) that "the male transvestist bears the male xy chromosome complex." Finally, there is Thompson's (36) theory: a hypothetic cerebral center "discharging without proper cortical control." As this theory does not lead to any testable deductions it is, at present, immune to criticism. All authorities agree that the age of onset of transvestism is in childhood or early adolescence, except in those cases where the behavior occurs as a complication of psychosis or organic brain lesion. Similar agreement exists on the predominance of the condition in the male. It shows no fixed relationship to the other sexual aberrations, and "is probably quite distinct from homosexuality and other perversions" (27). Lukianowicz (25) found that more than half of the reported heterosexual male cases were

married and had children. The incidence of divorced male transvestites was given by Hamburger (18) as 23 per cent, while 86 per cent of the marriages of female transvestites end in this manner. It appears that, in both cases, it is the wife who brings about a divorce, losing patience with her transvestite husband in the first instance, and finding the heterosexual advances of her husband "nauseating" and "unbearable" in the second.

As to treatment, the literature on transvestism may be summarized as follows:

Psychotherapeutic: Most writers advocate psychotherapy in one form or another. Ostow (32) stated his belief that "no psychotherapeutic procedure less than intensive, prolonged, classic psycho-analysis" would have any effect. He neglected, however, to give any facts in support of this opinion, and admitted that the treatment is "uncertain, protracted and expensive." Peabody (33) maintained that "the analytic approach or psychotherapy with emphasis on dynamic understanding and guidance offers the best results." This conclusion is expressed in a paper describing such treatment in two cases of transvestism and one of glove fetishism. In one case, transvestism was associated with psychopathic behavior, and treatment was unsuccessful. The second transvestite was still undergoing treatment at the time of the report, and the glove fetishist, who also suffered from schizophrenia, was still using his fetish after two years of psychoanalysis. Deutsch (10) described remission of transvestite behavior in a very inadequate patient following analysis. This patient's view of women—"Nobody expects so much of them"—suggests that the therapist may have relieved this symptom by helping him to overcome his numerous other personality problems. A somewhat similar case reported by MacDonald (26) improved rapidly when his central problem, which "was considered to be one of isolation," was solved. Lukianowicz (25) concluded that "some encouraging results were achieved by a superficial psychotherapy, an understanding and permissive attitude and some environmental manipulations." However, he seemed to regard psychotherapy as a means of helping the patient to adjust to his abnormality, rather than as a means of removing his symptoms.

Physical: Physical treatments have been found to abolish transvestite behavior when it occurred in association with a psychosis. Liebman (23) described the simultaneous relief of transvestism and other symptoms in a schizo-affective psychosis treated with electroconvulsive therapy. Eyres (11) reported recovery following this treatment in two patients whose transvestism was associated with depression.

Endocrine: Some writers have recommended the use of hormones in this condition. Benjamin (6) suggested that psychotherapy "be supplemented by endocrine treatment at the earliest possible stage," but gave no data to support his view. Jones's (21) patient obtained complete suppression of his symptoms by stilbestrol, 1 mg. three times a day, but this treatment is not applicable to the majority of heterosexual transvestites who are married.

Surgical: Surgery has been considered in relation to this problem in two ways. Davies and Morgenstern (9) described transvestism in association with cysticercosis and temporal lobe epilepsy in a patient in whom surgical intervention was unfortunately not possible. Mitchell *et al.* (28) reported relief of fetishism associated with temporal lobe epilepsy by temporal lobectomy.

Castration in a case of trans-sexualism has been described by Hamburger *et al.* (19). Unfortunately, no follow-up was included in the report. Hamburger (19) strongly recommended the treatment, asking "with what right society compels persons to tolerate the presence of these organs." Ostow (32) asked: "If the patient has a wish to die, should the physician actively comply with the patient's wish or

even condone his suicide?" Bättig (1) described a patient on whom this operation was performed, and who then became "utterly lonely, very depressed" and wanted "only to be changed again into a man."

Pharmacologic: Pennington (34) recently described trans-sexualism in a patient whose desire to have an operation was rapidly relieved by administration of nialmide, meprobamate and chlorpromazine. Cerebral pathology was suggested by an "anxiety reaction" in which the patient "cross-dressed, went into a trance-like condition, partial shock, with profuse perspiration, trembling, and a period of amnesia for about half an hour." Apparently an electroencephalogram was not made. Hormone imbalance does not seem to have been considered, despite the patient's report that, at the age of six, his transvestism was accompanied by masturbation. Follow-up on this patient was very brief.

This review of the literature indicates that several therapeutic approaches have been taken but none has been established as clearly superior. Psychotherapy seems to have a place when transvestism occurs in association with other forms of maladjustment, and treatment of the primary illness can be expected to bring relief of transvestism which occurs as a complication of underlying psychosis. We suggest, however, that transvestism can be treated symptomatically at a purely behavioral level.

DISCUSSION

The need for effective treatment in transvestism is evident from a study of the literature. We felt it was logical to apply a technique based on classic conditioning, and were encouraged in this decision by Raymond's (35) successful treatment of a fetishist by a similar method. Since the publication of our preliminary report, Glynn and Harper (14) have described the successful treatment of another transvestite by aversion therapy.

Despite the apparent efficacy of this method, observations made during the course of the treatment raise several theoretical problems regarding the modus operandi of this form of aversion therapy. If, as is suggested, this type of behavior therapy operates through a process of conditioning, one would expect certain relationships between variables to have held throughout the course of the treatment. The time interval between the onset of the conditioned stimulus and the response should have ranged between 0.5 sec. and 2.5 sec. for optimal conditioning. The response (vomiting) should have been under greater control than was possible, and the conditioned stimulus terminated when the response occurred. There was marked variability between the onset of the stimulus and vomiting. On many occasions the patient did not vomit, especially during the later trials. We therefore had no reliable indication as to when the response had been made; indeed, it might be argued that, in some of the trials, we were reinforcing an association between the conditioned stimulus and relief from nausea. This suggests that some learning factors other than classic conditioning may have played a part in the removal of the patient's symptom.

We hope to deal with this and other theoretical considerations in a later paper. The difficulties in this type of treatment may be greatly reduced by refinement of the techniques employed and by experience in their use.

SUMMARY

The use of aversion therapy in a case of transvestism is described. We have been unable to find a reference in the literature to the application of any form of behavior therapy to this problem.

The literature on transvestism has been briefly reviewed.

The suggestion is made that the refinement of this technique may increase its

us fulness and possibly add to our understanding of the problems of transvestism and of the acquisition and modification of aberrant behavior.

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HAUSMAN, LOUIS. *Atlas III: Illustrations of the Nervous System.* Thomas, Springfield, Illinois, 1961. xxxi + 168 pp., illus. $9.50

This volume is a presentation of the anatomy of the nervous system through black-and-white drawings. The author also attempts to present a concept of the phylogenetic development and organization of the nervous system, and stresses throughout the book the functional aspects of anatomy. The venous and arterial circulation of the brain and spinal cord is demonstrated quite adequately in a series of drawings in keeping with the stress on vascular disease currently prevalent in clinical medicine.

Each drawing is labeled in prominent, legible print, and the legend for each drawing is adequate. Where appropriate, the author acknowledges the source of the drawing or of the concept which he is presenting. He states that the atlas is meant for use with his first two atlases, which were designed to assist in the construction of a brain model; this book can, however, be of value with or without the exercise of building a brain model. The author evidently intended this volume for the use of those with clinical interests, since there are frequent clinical allusions.

The reviewer believes the atlas will be most helpful to those training in clinical neurology, neurosurgery, psychiatry and neuropathology, who often need a source for a rapid review of neuroanatomy. Medical students will also find this book useful in conjunction with their gross and microscopic studies of the nervous system.

HARTMANN-VON MONAKOW, KURT. *Das Parkinson-Syndrom.* S. Karger, Basel and New York, 1960. 152 pp. Sw. Fr. 24.–

This monograph is based on 814 verified cases of Parkinson's disease seen at the Neurological Clinic in Zurich. The case material was as follows: paralysis agitans, 1 .1 per cent; postencephalitic Parkinsoni n, 63.1 per cent; arteriosclerotic variati n, 21.3 per cent; miscellaneous etiologies, .5 per cent. The high incidence of postencepl a-litic cases is explained by the severity of the von Economo encephalitis in Euro e, but, in addition, many recent cases of a postencephalitic etiology were seen.

After a historical review and a detailed description of anatomic findings and physiologic concepts (25 pages), the clinical material is analyzed for the various subgroups (31 pages).

Drug therapy is considered in great detail (52 pages), with painstaking analysis of the therapeutic effects of a large number of drugs, including 19 new synthetic preparations. Surgical therapy is considered to be superior to drug therapy. Of 37 patients operated upon, 22 showed improvement far greater than that seen with drugs, but all had to continue on some form of drug therapy (11 pages). The evaluation of any and all forms of therapy is difficult, and the author is aware that, except for drug-produced Parkinsonism, no full cure can be expected at this time. The bibliography is extensive (26 pages).

Paul F. A. Hoefer

BAYER, LEONA N. AND BAYLEY, NANCY. *Growth Diagnosis.* Univ. of Chicago Press, Chicago, 1959. xiv + 241 pp., illus. $10.00

Growth Diagnosis describes several measures which, together with the usual height and weight indices, should be used in a total evaluation of growth. They consist of various skeletal measurements, anthropometry, photography, and x-ray techniques, all described in clear detail. Although the work in this book has obvious medical implications, such as the ready diagnosis o deviant children, it also has importan

psychologic and psychiatric implications. Several areas of important—if not popular—psychologic research could utilize exact and valid measurements of physical growth. The relationships between body-image, or self concept, and physical status have not been adequately or consistently explored to this reviewer's knowledge. This is particularly true if one considers the reaction of significant individuals to a given subject's physical status and their consequent responses to him. Similarly, the relationships between glandular functioning, physical growth, minimal brain damage and mental development apparently are interrelated variables in a rather new and not well understood research area. Needless to say, accurate, valid and repeatable measurements of physical status would be an aid to such "mind-body" research. However, from a psychologic or psychiatric point of view, the techniques described in this book have rather severe limitations. For example, the usual psychologic laboratory does not have x-ray or elaborate photographic equipment at its disposal, nor would the researcher ordinarily be trained in the use of this equipment. Also, norms for physical development certainly would vary with the socio-economic, national and ethnic backgrounds of the subjects. Normative data would have to be established for various groups within our heterogeneous population. Unfortunately, *Growth Diagnosis* does not provide adequate norms for varying groups.

Gerald Wiener

SNYDER, WILLIAM U. AND SNYDER, B. JUNE. *The Psychotherapy Relationship.* Macmillan, New York, 1961. xii + 418 pp., illus. $7.50

Dr. Snyder, Professor of Psychology and Director of the Psychology Clinic at Pennsylvania State University, is widely known in the field of counseling psychology, has written extensively, and can be considered to be an authority in this field. This book, a report of a four-year research project on the psychotherapy relationship, reviews much of the literature in the area of the patient-therapist relationship and presents extensive case material demonstrating methods used by Dr. Snyder in his treatment of some 20 patients. The study, as the author admits, is limited in one aspect, since it deals only with Dr. Snyder as psychotherapist, and with his techniques with these 20 clients.

The book reports his findings on the interaction between therapist and patient, which were analyzed statistically and clinically. The patients were 19 graduate students in psychology and one instructor in an allied department. They had sought help for personal problems, but agreed to cooperate in the research as payment for the treatment. The mean age was 27.4 years, with a range of from 22 to 42 years. Three were women. Treatment periods extended from 12 to 55 interviews, with a mean of 25.5 interviews. Only four cases continued for less than 20 interviews.

Dr. Snyder developed two 200-item questionnaires, one for himself and one for the clients. These contained items which dealt with positive or negative feelings toward the treatment interview and toward the client or therapist. The questionnaires were filled out after each interview. Clients also completed the Edwards Personal Preference Schedule after every fifth interview, and, early in therapy, the Minnesota Multiphasic Personality Inventory. Dr. Snyder completed the Edwards twice, with one year between test re-test. At the end of treatment he ranked each patient in relation to the others on rapport, hostility, dependency, guardedness, success of the case, and amount liked by the therapist. From one to three years after therapy he rated the patients in estimates of the types of value systems they held, affect, controllingness, and self-disclosure (toward the therapist), affect reaction from the therapist, maladjustment present at the beginning of

therapy, and also on Leary's "circle" of personality traits. He also dichotomized them into "better" and "poorer" patients on the basis of multiple criteria of seven of the total (above) group of measures.

Factoring of the 200-item questionnaires showed that they measured positive and negative feelings. One could determine how clients felt about each treatment session and how the therapist himself was affected. As Dr. Snyder comments, the scales are valuable as a method of establishing the presence of negative feelings toward a particular patient. If such feelings are indicated by the Affect Scale, the therapist should certainly not attempt to treat him.

The material obtained from the psychologic tests presents a conflicting, unclear picture of patients and their reactions. The chapters dealing with clinical material and impressions are much richer in furnishing an understanding of the therapeutic procedure, and success of treatment was predicted by the ratings used. Dr. Snyder presents very little follow-up material, but the determination of successful psychotherapy is a controversial area, and his use of ratings does offer a yardstick of a sort.

One serious defect in his book is in the material dealing with transference and counter-transference. Dr. Snyder is obviously not an analyst or analytically trained, but he is familiar with the literature and has made an extensive study of the area in which his study lies. Nevertheless, he presents a rather naïve concept of this subject. He is quite correct in assuming that patients can and do have positive and negative feelings toward their therapists, and that such feelings may not be based on the reality situation. Certainly his Affect Scales are a means of measuring intensity and direction of these feelings. Yet Dr. Snyder believes that the therapist can play certain roles in his treatment situation "which he prefers over others, and these will automatically be emphasized in his therapy. For example, our therapist [Dr. Snyder] emphasized a parental role" (p. 366).

Now obviously a therapist may feel paternal or maternal or brotherly or sisterly toward a patient. But the nature of the transference is not so determined. How the patient reacts to his therapist is determined by his unconscious needs, not by predetermination of the therapist. The therapist can play "father," but the patient may feel he is more like his mother when he (the patient) was six years old. In non-analytic therapy the therapist needs awareness that he may play many roles to his patient, and that he must not become unnecessarily involved. Fortunately, Dr. Snyder does seem to possess the maturity and objectivity to help his patients.

The author emphasizes that, for him, successful therapy depends upon his being seen by the patient as a benign father figure who, when treatment terminates (or not too long after), will be regarded as a colleague or an equal. Unwittingly, his kindliness and verbal emphasis to patients to see him as a father figure could have caused the rather extreme transference and counter-transference reactions he mentions as having occurred. The Affect Scale may therefore be measuring the patient's and therapist's attitudes to an unconscious emotional feeling. One is puzzled that eight of his patients fantasied having sexual relations with him, while 14 of the 20 expressed concern about homosexual feelings. In any therapeutic situation the therapist must recognize the reality of the feelings presented to determine whether they are justified, or whether they stem from something unrelated to the treatment situation. Dr. Snyder's patients had intense and disturbing feelings which may have been due to passive-dependent desires which were either satisfied, stimulated or frustrated by Dr. Snyder's emphasis on himself as a parent. Their scores on the Affect Scale might be measuring this reaction. Dr. Snyder's answers to the Affect Scale might,

in turn, measure his being annoyed or pleased by patients, depending upon their acceptance or refusal of his role as a benevolent parent. This inability to recognize the nature of the transference is most clearly indicated in the lengthy case history presented early in the book. Here a client with latent homosexual fantasies reacts in a manner which is logical if one can recognize the nature of the transference and the way in which it was handled. Although this case terminated successfully, Dr. Snyder seems not to have realized what was going on.

The factoring of the Affect Scales on all of the patients revealed two factors to be present: one of active resistance or hostility, one of passive resistance or withdrawal. On the therapist Affect Scale there were also two negative factors: one of impatience with the patient, one of anger at or irritation with him. Each Scale also had one positive factor, but for the patients this appeared consistently only when treatment ended.

The Affect Scales are a contribution not only to research but also to an objective guide for analyzing the presence or absence of positive or negative feelings. By means of these Scales a therapist may recognize whether he is remaining objective, or whether he needs to evaluate further what is going on between his client and himself. The Scales are not a substitute for the therapist's awareness of what is happening in the treatment hour.

Sol Charen

HEATON-WARD, W. ALAN. *Mental Subnormality: Subnormality and Severe Subnormality.* John Wright, Bristol, England (Williams and Wilkins, Baltimore, exclusive U. S. agents), 1960. 64 pp. $2.00 (paperback)

"Mental deficiency" in England has been abolished by law, and "idiots," "imbeciles," the "feeble-minded" and "moral defectives" are no more. The Mental Health Act of 1959 has done away with all of these terms, and in their place has introduced "mental subnormality" as the generic term, and "severe subnormality" and "subnormality" to describe degrees of arrested or incomplete mental development. Dr. Heaton-Ward, Medical Superintendent of the Stoke Park Hospital Group in Bristol, was evidently prompted by the passage of the new Act to write this slim treatise.

The book contains chapters on the concept of mental subnormality; normal and subnormal development; diagnosis, etiology, care and treatment; the abilities and behavior of the mentally subnormal; epilepsy and mental illness in the mentally subnormal; intelligence tests; and legal aspects of care. The weakest chapter is probably the one on psychologic tests, *e.g.*, the Koh [*sic*] blocks, the Porteous [*sic*] mazes, the Zondi [*sic*] test, etc.; while the most interesting is the one which sets forth the provisions of the new Act. As might be expected, these differ in a number of respects from the provisions of corresponding legislation on this side of the Atlantic.

This reviewer wishes that the author had placed more emphasis on sociocultural factors in mental subnormality. Mongolism in England probably does not differ greatly from mongolism in this country, whereas differences in the two cultures might be reflected in the characteristics of the familial or so-called "garden-variety" subnormal. But Heaton-Ward's purpose in writing the book was not to provide material for cross-cultural comparisons, so that criticism on this score is not valid. As a brief introduction to the field of mental subnormality, the book has merit.

A. B. Silverstein

JACO, E. GARTLY. *The Social Epidemiology of Mental Disorders.* Russell Sage Foundation, New York, 1960. 228 pp., illus. $3.50

E. Gartly Jaco, of the Cleveland Psychiatric Institute, reports in this book the results of an important psychiatric epidemiologic study which attempted to estimate the incidence of psychotics in a large population, to determine the importance in such a study of including privately treated cases, and to relate a number of sociologic variables to the incidence of mental disorders.

Texas was chosen as the locus of the investigation because of "the opportunity it offered for conducting a survey that would include all cases receiving private psychiatric treatment" (p. 7). This is an important advance over most previous epidemiologic studies, but, curiously, the author nowhere explains why Texas alone offers this opportunity, nor does he indicate what percentage of privately practicing psychiatrists took part in the project. The implication is that there was 100 per cent participation; this would be most unusual, and some explanation is in order.

On the whole, the reported study was well planned and executed. Information was collected for all reported new cases of psychosis in the State of Texas during the two-year period, 1951–1952. This information included such data as county of residence, age, sex, occupation, amount of education, ethnic and church affiliations, diagnosis, and source of treatment.

The inclusion of privately treated cases, the use of incidence rather than prevalence rates, and direct adjustment of rates for age, sex and ethnic background appear to have resulted in a more nearly adequate representation of psychotic women and patients from professional and semi-professional classes.

Because the study was carried out in Texas, a number of comparisons could be made among the Anglo-American, Negro and Spanish-American groups. The results of the study show that the Anglo-Americans had by far the highest rate, the non-whites the second highest, and the Spanish-Americans the lowest. In many respects the differences reported among the three subcultural groups are striking, and are extremely difficult to interpret. Jaco's data, for example, show almost twice the incidence of schizophrenia for Anglo-American as for Spanish-American women. Faced with these figures, one must immediately question to what extent they can be accounted for by the greater use of psychiatric facilities by the Anglo-American subgroup. Jaco anticipates this criticism by pointing out that "more than two and one-half times the number of psychotic cases would have had to be omitted among the Spanish-speaking group for their rate merely to equal that of the Anglo-Americans.... It does not seem likely that there could be nearly three times as many psychotic individuals within the Spanish-American group who were able to escape this survey net or avoid treatment for the two-year study interval" (p. 58).

However, the sources of "treatment" as surveyed by Jaco refer only to psychiatric facilities. It may be that the inclusion of non-psychiatric physicians and non-medical practitioners as sources of data would not change the total picture—but we really do not know. In this reviewer's opinion, the study would have been greatly strengthened if this additional data-collecting had been carried out in one county, for purposes of comparison.

Despite these criticisms the project is, on the whole, an excellent one from a methodologic point of view. As is true of most epidemiologic studies, many questions are raised, few answers given. This is as it should be. Theories about the etiology of mental illness have always greatly exceeded the number of hard facts available. In our present state of knowledge, it is imperative that this imbalance be redressed.

Walter Weintraub

ADAMS, RAYMOND D., EATON, LEE M. AND SHY, G. MILTON, EDS. *Neuromuscular*

Disorders: The Motor Unit and Its Disorders (Proceedings of the Association for Research in Nervous and Mental Disease, Vol. 38). Williams and Wilkins, Baltimore, 1960. xx + 813 pp., illus. $20.00

This book presents a survey of the information available on the structure and function of the motor unit in both normal and disease states. The editors have struck a beautiful balance of both laboratory and clinical material in assembling the volume. The contributors were exceptionally well chosen, each having made important contributions to the field he discusses. The result stands as a tribute to Lee M. Eaton, who organized the meeting of the ARNMD at which the papers were originally presented. His untimely death shortly before the meeting prompts one to consider the volume as a memorial to this eminent neurologist.

The contents of the volume are divided into five sections: basic structure and function (five papers), experimental pathology (three papers), laboratory approach to clinical problems (three papers), the clinical problems themselves (11 papers), and experimental techniques of promise (six papers). Subject material is generally well presented, with appropriate attention to the work of the contributor and that of others. Particularly well written are the chapters by Gergely on biochemistry of muscle contraction, del Castillo on excitation, conduction and neuromuscular transmission, Adams on histopathology of human muscle disease, Walton on muscular dystrophy, and the brief but thoughtful contribution of Tyler on inheritance of neuromuscular disease. On the other hand, the chapters by Hodge on the ultrastructure of muscle fiber and by Denny-Brown on experimental data regarding hypertrophy, regeneration and degeneration are rather difficult to read. All of the clinical problems in neuromuscular disease, both pediatric and adult, are given thorough coverage. There is considerable repetition through coverage of material in more than one chapter (sometimes several), but this is not obtrusive. Bibliographies are thorough, sometimes exhaustive and exhausting (over 250 references each in the papers by Walton on muscular dystrophy and Rowland *et al.* on myasthenic syndromes).

I found very helpful the thorough airing of differences of opinion on a number of issues—for example, the criteria for histologic diagnosis of muscle regeneration, and the definition and scope of myasthenia gravis. The discussions are occasionally entertaining: Nachmansohn, emphasizing the differences between his ideas and those of del Castillo regarding neuromuscular transmission, quoted Max Plank: "Scientific opponents can never be convinced, their opposition only dies with their death." Gergely remarked: "Dr. Nachmansohn has suggested a helpful way of settling scientific discussions." Del Castillo then closed with, "May I finish by wishing Dr. Nachmansohn a very long life?"

A few criticisms are in order. Typographic errors are rare, but occasional incorrect numbers referring to bibliographies are annoying. We are told frequently that the syndrome of the limp or hypotonic child is to be discussed elsewhere in the volume by Dr. Buchanan (as indeed he did at the meeting), but nowhere is his paper to be found! The fascinating pharmacology of the neuromuscular function is discussed in detail only with regard to the acetylcholine system. Important effects of the many synthetic drugs used widely in the laboratory and clinic are mentioned only very briefly. A more nearly complete pharmacologic discussion might have prevented the error of Schwab and Viets, "the (anticholinesterase) drugs when increased produce weakness from competitive blocking of the motor end plate" (p. 631).

My major criticism, however, has to do with the mechanisms of publication. The ARNMD meeting took place in December,

1958. The volume of completed manuscripts is dated 1960 but became available generally only in February or March, 1961, more than two years after the meeting. It is obvious that some of the material must be outdated to a greater degree than is usual in monographs. Some of the authors were able to include references to publications dated 1959 and early 1960, but others did not or could not. This discrepancy between date of presentation and date of publication is particularly noticeable in discussion of laboratory research data. Even in discussions of mechanisms in myasthenia gravis, however, the material presented was timely for late 1958 but seriously incomplete by 1961. (Note the newer evidence on pre-synoptic mechanisms.) It should surely be an important goal of editors and publishers to make the volume available much closer to the time of the original meeting.

Despite these objections, this volume is an important source of material, is generally well presented, and is highly recommended.

Leonard Berg

McGuigan, Frank J. *Experimental Psychology: A Methodological Approach.* Prentice-Hall, Englewood Cliffs, New Jersey, 1960. vi + 314 pp. $6.00

The field of experimental psychology has traditionally been defined in terms of such content areas as sensation and perception, learning, thinking and memory; and conventional tests have been organized accordingly. Today, the trend is to define the field in terms of methodology, with emphasis on research design and statistics, and the philosophy of science. Dr. McGuigan, Professor and Head of the Department of Psychology at Hollins College, has written an unconventional text to meet this trend.

As evidence of its unconventionality, consider the following: a) The name of Wilhelm Wundt, the father of experimental psychology, does not appear in the index. b) Not one of McGuigan's references dates back to the last century, and two-thirds are less than ten years old. c) The text makes no mention of the psychophysical methods, or those of experimental esthetics. The author's approach is thus not only methodologic but ahistorical as well.

Following an overview of experimentation, McGuigan presents three chapters on The Problem, The Hypothesis, and The Experimental Plan. A series of six chapters deals with Experimental Control, the Independent and Dependent Variables, and several basic experimental designs. The last four chapters are concerned with such topics as The Logical Bases of Experimental Inferences, and Generalization, Explanation, and Prediction in Experimentation. Five of the chapters conclude with problems for the student.

In general, the book is clearly, simply and accurately written, but there are a few notable exceptions. A portion of McGuigan's discussion of the null hypothesis seems much more likely to confuse the student than to enlighten him, and the author himself betrays some confusion when he states that "Einstein's work on the movement of Mercury's perihelion led to the discovery of the planet Neptunus by Leverrier." But these are relatively minor faults.

McGuigan's hope in writing the book was to "maximize transference of performance from a course in experimental psychology to the type of behavior manifested by the professional experimental psychologist," and it may be that this hope will be realized. This reviewer cannot help wondering, however, where and when the student is to be exposed to the classic experiments in the field if not during his undergraduate course in experimental psychology. Or can it be that such exposure will not make him a better experimentalist?

A. B. Silverstein

Serra, Carlo and Covello, Lucio. *Elettromiografia Clinica.* Acta Neurologica,

Napoli, 1959. 507 pp., illus. Lit. 6.000 ("brochure"); Lit. 7.000 (bound)

This book is a lengthy, uncritical review of an extended bibliography; there is no new material for which the authors seem to be responsible. The decisive value of electromyography in medical and neurologic diagnosis is over-emphasized. The figures are of poor quality. Several better reviews of electromyography are readily available.

William M. Landau

SULLENGER, THOMAS EARL. *Neglected Areas in Family Living.* Christopher Publishing House, Boston, 1960. 447 pp. $5.00

The author calls this "a book prepared for the general reader . . . a feeble attempt to renew the interests in those areas which have received less attention in our standard textbooks on marriage and the family."

The volume, which contributes nothing to sociologic research or theory, consists of 50 articles divided into nine chapters; each chapter represents what the author considers to be a neglected area in family living, and is preceded by an introduction in support of the author's choice of the contributions. Among the chapter titles are: "Criteria of Martial Happiness," "Family Rituals," "The Family Meal," "Household Pets" and "Family Intracommunication." Some of these may indeed be neglected areas, but such subjects as family meals and house pets contribute little toward a better understanding of family organization or marital happiness. The latter topic might also better have been omitted: marital happiness is culturally, socially and personally conditioned to such an extent that accurate measurement is difficult for investigator and client.

Dr. Sullenger's book would contribute little to a theoretical course on the family at the college level, but might be a suitable auxiliary text for a more general or practically oriented course. Many of the articles were written by authorities in the behavioral sciences: Vance Packard, James Bossard, Eleanor Boll, Evelyn Duvall, Clark Vincent, Emily Mudd and others. All were written for the layman. About three-fifths had previously been published in household magazines, *i.e., Look, McCall's Collier's,* etc., in Sunday supplements, *i.e., This Week Magazine* and *The New York Times,* and in parent- and family-oriented magazines. Several of the articles were reprinted from such professional journals as *American Sociological Review, Journal of Home Economics* and *Journal of Educational Sociology.*

Neglected Areas in Family Living may appeal most strongly to the middle-class housewife, who can here read in one volume carefully selected articles similar to those usually published in household magazines.

A short biography of each contributor should be included if college-level courses are to utilize such a book. Also lacking are some form of systematic conclusions, drawing together the central thesis of the book, and a summary of the ideas presented by the contributors, and their significance. The author, through his reading selections, professional position of contributors, and his established categories of neglected areas, seems to have spread his net too wide—has tried to interest too many kinds of readers. The book has some appeal but it is doubtful that it will receive much attention from those most likely to be interested in it.

Robert L. Derbyshire

WINN, RALPH R., ED. *A Concise Dictionary of Existentialism.* Philosophical Library, New York, 1960. 122 pp. $3.25

To the student anxious to learn something about existentialism, the title of this small work is perhaps as misleading as is that of another work issued by the same publisher, *A Short History of Existentialism.* The latter is not a true history, nor is the present volume a true dictionary. Rather

than being a precise explication, each definition is in the form of a tiny essay selected from the writings of six existential thinkers: Heidegger, Sartre, Jaspers, Marcel, Kirkegaard and de Beauvoir. To understand such definitions without reference to other than existential thinkers, one must already be to some extent grounded in existential thought.

Further limitations are to be found. The editor, for example, does not make clear the distinction between Jasper's and Heidegger's use of "dasein." Nor is the word list by any means exhaustive of existential terminology: omitted, among others, are such vital concepts as "necessity," "bad faith" and "authenticity."

The student must still await the practical dictionary for the uninitiated reader. However, this little volume, an epigrammatic survey of what six important existentialist thinkers have said on subjects as eternal as "being" and as topical as "Americanism," will divert the fluent existentialist in search of a little reading not involving too much commitment.

William B. Holden

SCHEFLEN, ALBERT E. *A Psychotherapy of Schizophrenia: Direct Analysis.* Thomas, Springfield, Illinois, 1961. xviii + 279 pp. $8.50

The following comments were originally prepared for the benefit of Dr. Scheflen. Later they were incorporated into the book as a preface. Nevertheless, because it best expresses the reviewer's precise evaluation both of Rosen's work and of this book, and because it embodies a careful weighing of both the positive and the negative aspects of the work and of this study, we are taking the unusual step of printing a preface as a review.
The Editors

Dr. Scheflen's report on direct analysis is a first attempt to determine precisely what goes on during this process, and the validity of the many claims, criticisms, theories and myths which have grown up around it. It does not provide a final answer to any questions, but it does shed a clearer light on them than anything that has yet been written, whether by Dr. Rosen or by his critics.

This volume does not present a final appraisal of the therapeutic values or limitations of Rosen's work. Indeed, it indulges in almost no value judgments. It rushes in to no pseudo-statistical claims about the kinds of patients that respond, because the numbers are insufficient to make any such generalizations statistically valid. It makes no premature generalizations about the duration of results, because time has been too brief, and the treated patients are still too few. For this very reason, however, it has a broader, objective importance. It describes clearly and often vividly what actually transpires on the surface, while providing insight into preconscious and unconscious processes as well.

These studies have employed some of the more precise techniques of linguistic, paralinguistic and kinesic analysis of the data from films and recordings. Consequently, in addition to their value as a study of Rosen's procedures, they will serve as a model for future investigations of the psychotherapeutic and psychonoxious forces which operate in any interaction among human beings.

At the same time, this report clears the air for future objective studies of Rosen's work by dispelling many myths and popular clichés about Rosen and direct analysis, including some illusions about the work which Rosen himself harbors and fosters. For instance, it becomes clear that in a condensed form something more subtle and complex may occur in direct analysis than Rosen's own descriptions would lead one to believe. This should not surprise us. A trained observer who is sympathetic yet objective can always perceive more of what is going on than is apparent to any active participant whose perceptions and judgments are colored by his emotions. It is a tribute to Dr. Rosen that he submitted himself to such microscopic scrutiny; and it is a tribute to Dr. Scheflen that he was able to devote himself exclusively to this study for several

y ars, yet maintain throughout that rare c mbination, sympathetic empathy and o jective critique.

Among the popular and usually deroga- t y clichés tossed about in most discussions o direct analysis is the idea that it is a p cess which tends to encourage, exploit a d capitalize on the patient's aggressive- n ss. If anything, a more accurate criticism w uld be in the opposite direction, *i.e.*, that t e therapist's aggression may block and o erwhelm the patient's aggressions prema- t rely, thus forcing the latter to simulate a lult restraints. Yet this should not be ac- c pted as a conclusive criticism, but rather a s an observed fact. Actually it is a chal- l nge which faces both ways: It is a chal- l nge not only to the technique of direct analysis, but also to those other techniques which are usually called regressive or ana- clitic. These, too, should be re-examined in the light of this observation. Even Rosen's direct command that the patient return into the psychosis for its re-enactment is not re- gressive in a technical sense. It is, rather, a testing device which is used repeatedly to- ward the end of treatment. And it takes more courage than psychotherapists usually exhibit—which is one reason why, in un- witting self-defense, they tend to condemn it out of hand as ruthless or reckless. Dr. Scheflen also shows that another popular be- lief is erroneous, namely, that Rosen delib- erately stimulates the erotic needs and feel- ings of his patients, focusing them on himself, exploiting them, and in some meas- ure gratifying them. Here again, the ob- served facts point squarely in the opposite direction. It will appear to many who study the data presented here that Rosen handles the patient's erotic drives, as he handles other aggressive drives, by authoritarian denial.

It also becomes clear that Rosen's experi- ments challenge psychiatrists of all persua- sions and all psychoanalysts, whether ortho- dox or heterodox, to re-examine many other presuppositions, prejudices and unacknowl- edged working hypotheses. Of these, one of the more interesting and important is the paradoxic attitude which psychoanalysts have toward time. Freud's concept of the timelessness of the unconscious, as well as other implications of his work, should long since have alerted analysts to the flagrant internal contradiction between these basic psychoanalytic tenets and the analyst's complacent acceptance of the notion that analyses must last a long time if they are to be thorough and "deep." Actually, this as- sumption contradicts all that we have learned through analysis itself both about time and about the operations of uncon- scious and preconscious trigger mechanisms. (Analytic findings imply that the role of trigger mechanisms must here be of para- mount importance to health and illness.) Yet psychoanalysts seem never to have re- alized that, if Freud's findings are correct, it should be possible to achieve in a moment changes as profound as can be achieved in ten years of analysis. Similarly, the ana- lyst's tolerance for "interminable" analyses is incompatible with the psychoanalytic de- struction of myths about habit formation. Training is not dependent upon repetitions which lead by some mysterious process to "habit formation." Nor is any process of "retraining" needed to add to some mystical faculty known as "ego strength." Only enough repetition is needed to enable us to search out and ascertain the prepotent trig- gers. Thus from several angles Rosen con- travenes the time-fetishism by which all psychiatry, including psychoanalytic psy- chiatry, has long been imprisoned. As a mat- ter of fact, there are other important impli- cations of psychoanalytic psychology which have never been incorporated into psycho- analytic therapy, and Rosen's technique, whether it is right or wrong in other respects, challenges psychotherapeutic complacency in a number of these areas. Thus Rosen dis- cards what has become an almost phobic avoidance of the homely techniques of re- ward and punishment, of gratification of de-

pendent yearnings, and of active intervention in the life of the patient with practical aids. To these and many other inconsistencies between analytic theory and practice, the brevity of Rosen's regimen brings a searching challenge.

Yet no one should imagine that Rosen's work has suddenly clarified all of these controversial matters. His solutions are fraught with danger, and his theories embody more logical fallacies than does his practical work. But all of it imposes upon us the necessity to open our eyes to new possibilities, and to the fact that our failure to ask new questions about our own habitual assumptions is equally dangerous. If Rosen's work did no more than shake us out of our complacency, and even if it never cured anyone, it would nonetheless be invaluable.

The criticism might be made that Rosen almost literally takes over the role of a godhead to become an unreal and magical figure: "As long as you have me you will remain well. If you ever give me up you will become insane again." This is a dangerous technique, if only because therapists are in fact not gods but mortals, and can die like anyone else. This alone would make it dangerous for the patient; but it is dangerous also for the therapist, because of its undertones and overtones of megalomania.

Yet this is not the last word to be said about it; because whether, when and how commands become internalized, how they remain internalized, and how new signals can be internalized to protect the patient from future psychosis are critical issues which have not been settled. That this internalization of healing commands sometimes happens during Rosen's procedure is evident—but it is equally evident that the outcome is not always such a happy one. Much basic research is needed, not on the evaluation of results, but on the processes of change, so that these can be more sharply defined.

If in the therapeutic community which Rosen creates his role is to be God, his assistants thereupon become his ministering angels, to carry out his God-like wishes and administer his rewards and punishments. The patients live surrounded by omnipotent and omniscient parental and sibling surrogates, mother and father are fused into one mother-father figure who commands an array of angelic sibling assistants to guard, protect, take care of, support, direct and feed the baby-patient.... This is the therapeutic milieu which Rosen creates for the psychotic patient. It might be assumed that this must be regressive in its influence, and that it must encourage limitless dependency. Yet within the course of a single session this same baby-patient will be commanded to become an adult, and to accept the fact that a time-limit has been set to his right to recapitulate infancy, childhood, latency, adolescence and maturity. All of this may happen in a matter of a few weeks, sometimes even less. The observer must ask, Is this possible? and if so, how? Yet as one watches what happens it becomes evident that this role-playing of omnipotent benevolence sometimes has an important dynamic impact even on disorganized and violently disturbed human beings. Perhaps it is possible to dislodge the image of a destructive angel of death from the mind of the psychotic *only* by confronting it with the image of an angel of light and life. If this should prove to be true, then by working with greater precision and greater care we may learn to mold out of Rosen's pioneer efforts some important new instruments for the psychotherapist's equipment. Moreover, when we contrast the induction of a patient into the individualized micro-hospital of direct analysis with the reception of a patient into even the finest of private mental hospitals, we should be shaken free of the last shreds of complacency. This is another challenge with which Rosen's work confronts us.

For instance, suppose that, instead of handling simultaneously 200 patients with well-established schizophrenic illnesses, each remaining in the hospital for an average

duration of, let us say, ten months, the same hospital used all of its facilities to handle not more than 20 patients at a time, never holding any patient for more than one month; and that during the entire stay of each patient the hospital used its total facilities, professional staff, nurses and physical plant on him in a way comparable to that which Scheflen describes in this account of procedures at the Institute for Direct Analysis at Temple University Medical Center. If such a hospital could handle 20 patients simultaneously for one month each, it would have handled 200 patients by the end of ten months, *i.e.*, the same number as under the conventional system. It would be interesting to compare the efficacy and the costs of such an effort with what happens in hospitals today.

It is clear that only families of exceptional means could afford to pay privately for the overhead of such a set-up. But if only one-quarter of these patients were saved from permanent hospitalization (each representing an average lifetime cost to the State of at least $50,000), this would be a saving in one year alone of $2,500,000, spread over the average life-span of those individuals. Thus the annual cost of such a set-up for 200 patients would be less than the cost of permanent care for 50 patients in Federal, State and private facilities. It should not be impossible for experienced hospital administrators and accountants to work out the costs of organizing, staffing and operating one experimental hospital along such lines.

These are some of the theoretical issues and some of the practical vistas this report opens up to us for thoughful consideration.

Lawrence S. Kubie

LEIGHTON, ALEXANDER H. *An Introduction to Social Psychiatry.* Thomas, Springfield, Illinois, 1960. x + 110 pp. $4.75.

This small book is divided into two major parts. The first, described by the author as "social psychiatry in action," discusses some examples of social psychiatry, including psychiatry and the law, military, educational, industrial and Government psychiatry, psychiatric institutions considered as social systems, group psychotherapy and community psychiatry. Heavily stressed is the fact that man, in addition to being a biologically and psychologically (intrapsychically) functioning unit, is also a social being, functioning in a variety of social and cultural groups and systems.

The author suggests the formation of "social psychiatric teams" to go into underdeveloped areas in this country and in the rest of the world, as well as into industry, the schools and the courts, to study the major problems of our time, including those created by accelerated change in all phases of life and by living in a threatened world.

The second part of the book extends the definition, and prudently suggests some challenging areas for applied and basic research, including sociocultural process and psychologic experience, and how these forces positively or perhaps negatively influence personality development and functioning as an individual passes through his "life arc."

Among other areas suggested for research are the comparative study of cultures, and intensive personality studies, including investigation of the "well" members of society in addition to the sick. In summary, the author reminds us that we do not practice or apply as much as we know, and also do not know as much as we should—specifically, about man as a social being.

This short book is well organized and well written; its contents are challenging and thought-provoking. Its bibliography is provocative. It is recommended to all individuals concerned with human behavior, especially those responsible for the teaching of psychiatry and related disciplines.

Julian W. Reed

HOFLING, CHARLES K. AND LEININGER, MADELEINE M. *Basic Psychiatric Concepts in*

Nursing. Lippincott, Philadelphia, 1960. xx + 540 pp. $6.25.

The authors have organized and presented their material in a clear and readable way, and the book fulfills its promise "to help the nurse to work more effectively with all patients."

The necessary background is provided for an understanding of the milieu in which the patient is treated, opportunities for nurse-patient contact (over a 24-hour period), and phases of personality development, together with the use of adjustment mechanisms to guard against anxiety. The reader is then introduced gradually to the complex of patterns that the staff nurse may make use of in working as an effective therapeutic agent in a nurse-patient relationship.

The authors have conscientiously built each new chapter on the groundwork laid in previous chapters. The technique of cross-reference within the text itself is a doubly effective tool, enabling the student to clarify (or to review for more effective learning) the terms or concepts as previously defined, and offering easy reference to the authors' definition of terms.

No attempt is made to give a single or particular reason for a patient's pattern of behavior; many possible contributing factors are discussed. The details of the arguments for and against any one theory of causality are omitted, but reference is made to differences between theoretical positions and the lack of substantive data to support any one theory. This is in keeping with the simplicity yet inclusiveness of the text.

Although guidelines are given for nursing care of patients showing the same general patterns of behavior, the suggestion is made that nursing principles be shaped to the uniqueness of the individual and the environment in which the nurse is working. The so-called problem-solving approach is recommended in the nurse's application of the basic concepts in nursing.

There are two major omissions. First, there are no references, either in the text itself or in the bibliography, to direct the student nurse to investigate schools of psychoanalytic thought other than the classically Freudian. The statement on page 47 is typical: "Both the method and the body of knowledge represent the work of Sigmund Freud and his followers. The facts and theories have come to form the core of dynamic psychiatry as taught in this country today; much of this material has been presented earlier in this book." This may be misleading to the basic nursing student, in that "Freud and his followers" may suggest an immutable, all-embracing system articulated by a founder and perpetuated by disciples, and without the implication that heterodox analytic schools have made substantial contributions.

The second omission is the failure to indicate other, non-analytic theories of personality development, and to direct the student to the breadth and variety of these formulations.

Marilyn Manning

Odlum, Doris (Johns, Ethel, ed.) *Mental Health, The Nurse and The Patient.* Lippincott, Philadelphia, 1960. viii + 192 pp. $3.90

Throughout the history of nursing, physicians have written most of the books in this field, a trend that has been declining as nurses have begun to accept their literary and professional responsibilities. This book is a nurse-editor's adaptation of one written by a physician for the use of nurses in England (its title: *Psychology, The Nurse and The Patient*).

The nurse who has studied interpersonal relationships and has known the nurse-patient relationship as an educative experience may be puzzled by this volume, and may question its usefulness to student or graduate nurses. The book appears to represent a transition period in Dr. Odlum's thinking as to what is needed by nurses to learn their functions, and combines old and relatively new material. A wide range of

content from psychology is presented in a familiar pattern of condensation. Connections between theory and clinical psychiatric nursing practice are obscure. It is also regrettable that a bibliography has not been provided.

The nurse-editor notes that a basic necessity of nursing, according to Dr. Odlum, is 'to listen with a receptive ear." This listening is inherent in many of the functions of nursing. Statements about these functions are frequently expressed as *shoulds* rather than as principles of nursing. The author closes this work with a prediction: "There will, however, be need for a great deal of change in the education of general nurses when psychiatric units are set up, as they undoubtedly will tend to be, in many general hospitals. Student nurses will then have to include in their course the study of the personal relationships between nurses and mental patient and also the techniques employed in psychiatric treatment, both physical and psychotherapeutic, in so far as the nurse can cooperate in them."

The usefulness of this book is found in its suggestions as to the educational and clinical needs of psychiatric nursing. Two of the more important of these needs, in the opinion of this reviewer, are that nurses identify the process or processes of applying the theory of nursing and other professions to the clinical practice of nursing, and that they identify the principles of nursing care rather than rely exclusively upon the so-called *should* system of nursing and the other professions. This is clearly a responsibility of nursing, and nurses cannot expect another profession to fulfill it. That a physician asked a nurse to edit and adapt this work for nurses is a step in this direction.

The book will be a useful addition to library collections of books on nursing.

Shirley F. Burd

PENDA, CLEMENS E. *The Child With Mongolism (Congenital Acromicria)*. Grune and Stratton, New York, 1960. xvi + 276 pp., illus. $9.50

This volume, a detailed analysis of the historical, clinical, developmental and laboratory aspects of mongolism, is in large part newly written material, although certain sections of the book have been taken from the original work on the subject, *Mongolism and Cretinism*, published in 1946. As in earlier writings on this subject, the book supports the theory that mongolism results from a failure of pituitary and thyroid function. The detailed and valuable description of the various abnormalities associated with this condition demonstrates developmental arrest in the skull, eyes and hands.

The chapters entitled "The Diagnosis of Mongolism at Birth" and "Physical Development" are excellent from a descriptive standpoint, and should be valuable to the clinician forced at times to a diagnosis within the first few days of life. Unfortunately, the attempts at substantiating the theory are interwoven with the descriptive material. The pathologic material described is again presented from the point of view of substantiating the concept of developmental arrest; as a result, certain pathologic features are emphasized more than others, even though there may not be statistical weighting of some of the topics presented.

The discussions of the biochemical abnormalities of the mongol are particularly inadequate, largely through no fault of the author, but rather because the data available have not been carefully controlled as to diet, vitamin deficiencies and so on.

The description of the thyroid abnormalities in the mongol tends to emphasize the deficient state of these patients, whereas the bulk of the evidence shows normal serum BEI or PBI and no abnormalities in the thyroid-binding proteins, indicating normal circulating levels and probably normal cellular levels. At present there is no way to ascertain whether somatic cells re-